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ABSTRACT

More than 90 surveys conducted during the past 40 years covering a variety of disabling conditions and employers' concerns regarding workers with these conditions were reviewed. The goal of this review is to identify, develop, test, and disseminate interventions for rehabilitation practitioners to use in job development and placement. The review focused on employer perspectives on resources to facilitate the employment of workers with disabilities (referral and recruitment, accommodation, and staff training resources), the influence of federal contracts and labor unions, career initiation and establishment, career maintenance and advancement, and employer characteristics. It culminated in a series of recommendations for action on the part of rehabilitation practitioners, policymakers, and workers with disabilities. The review revealed that employers are much like the general population in that they have had and continue to have reservations about workers with disabilities despite the available evidence that disabled individuals make valuable, competent employees. Although employers do appear to be aware of the differences in persons with varying disabilities and do seem, to some extent, to assess different employees' abilities differently, it appears that stereotypes persist. This seemed especially true in the case of severe physical disabilities, mental illness, and mental retardation. It appeared that there are few hard and fast rules that can readily be applied to job development and the job placement of persons with disabilities. (Bibliographies of employer surveys and general references on workers with disabilities are appended.) (MN)

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EMPLOYER CONCERNS

Regarding Workers With Disabilities

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Arkansas Research and Training Center
In Vocational Rehabilitation

Employer Concerns

Regarding Workers With Disabilities

Reed Greenwood
Virginia Anne Johnson

December 1985

University of Arkansas
Arkansas Rehabilitation Services

Preface

This publication represents an effort to review and analyze surveys of employers regarding their concerns about workers with disabilities. More than 90 surveys conducted during the past 40 years were reviewed, along with other related literature which was included whenever a topic required amplification, or a resource to address a particular employment problem was identified. Findings were analyzed and presented primarily in terms of the career development process, with surveys used throughout as they relate to each stage of career development.

This review, directed toward enhancing the employability of workers with disabilities, is part of a five-year program of research at the Arkansas Research and Training Center in Vocational Rehabilitation. The purpose of the focus on employers is to identify, develop, test, and disseminate interventions for rehabilitation practitioners to use in job development and placement. This review serves to document concerns about the employment of workers with disabilities and provides, in part, a foundation for the development of these interventions.

We are particularly appreciative of the patience and excellent assistance provided by Anita Owen who typed the manuscript through multiple revisions. Also, we extend our thanks to Mary Drevdahl and Patty George for their valuable assistance in the preparation of this document.

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Reed Greenwood
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INTRODUCTION

People with disabilities have not entered the workforce in numbers representative of their prevalence in the population (Bowe, 1984). At the time of the 1980 U.S. Census, 8.5% (about one in 12) of all working age persons in America reported one or more disabilities, and most were not in the labor force (Bowe, 1984). In addition to the personal consequences of unemployment for Americans with disabilities, this means that valuable human resources are not being utilized effectively to build a strong economy. For some, this is due to inability to functionally meet the demands of the work environment; however, many have the capability of working, yet continue to meet resistance from potential employers. This is partly due to unfavorable attitudes on the part of employers (Schroedel, et al, 1979). However, attitudes represent only one part of the overall problem. Employers express concerns across a variety of issues. This literature review was conducted to address the broader picture of employer concerns regarding workers who are disabled.

Representing an attempt to analyze and discuss the findings of research in this area, this review is a part of the programmatic research and training strategy conducted by the Arkansas Research and Training Center in Vocational Rehabilitation. The findings provide information for continuing research and training efforts conducted at the Center, particularly for the development of new interventions with employers. It was anticipated that readers may not wish to review all of the material in depth. The primary purpose of the document is to provide the analyses and the resulting conclusions to interested readers who wish to have a source document on employer concerns.

A debate between the authors ensued during the early stages of reading and analysis regarding the scope and type of studies to be included. Many articles dealing with employer development are available. Unfortunately, a number are based on clinical experience and common sense notions without reference to research or empirical investigations. Therefore, it was important to collect the literature which involved some form of research investigation with employers. Going to this source provided the most direct evidence regarding employer concerns. When necessary, other material is discussed in order to provide a more complete understanding.

The general format for the review also precipitated some discussion. After considerable thought and a number of meetings, it was decided to organize the findings around the process of employment, i.e., from career initiation through career advancement. Since we also wished to describe the relationship between employer characteristics such as size and type to receptivity to workers with disabilities, a section on this topic was included.

Detailed information about some of the studies is included in the review. This provides the reader with important study characteristics such as sample, scope, and methodology. In most places an effort was made to include these critical factors in the description of the research. Because several of the studies contained information relevant to more than one section of the analysis, the reader may find some redundancy. This was done to assure the reader of complete information in case the entire report was not read.

One of the difficulties in reviewing over 35 years of research covering a variety of disabling conditions is the interpretation of the results in light of changing times. It was not possible to review the studies in a neat chronological order. Therefore, limited attention has been paid to differences in the times when the research was conducted. The authors fully understand that legislation and social changes have enabled persons with disabilities to enter an ever increasing variety of jobs since the 1940's. Also, it is assumed that employers are more knowledgeable and more interested in workers with disabilities than ever before. The game has been changed, and even the playing field is now different. However, the literature was reviewed in its entirety and some license taken with respect to changing times.

In some areas it was felt that an indepth review of the studies was important. For example, the study by Bressler and Lacy (1980) was a significant contribution in an area where almost no work has been done--their work on career advancement of workers with disabilities in the civilian work force of the Air Force deserves careful review.

One of the questions which could be raised in this area is why there is a need to be concerned with employer concerns about workers with disabilities since Federal legislation now requires affirmative action programs by many employers. The basic purpose of this review was not to provide information on the productivity of workers with disabilities in order to convince employers of the abilities of this group. Rather, the concerns of employers need to be made known so that persons who are disabled and rehabilitation practitioners know how to assist employers in recruiting and integrating such workers into their organizations.

Some mention should be made about methodologies involved in the studies included in the review. Direct mail surveys were the primary vehicle used, although some studies involved personal interviews. Sampling methods varied as did the population of interest--some addressed one disability while others involved general, unspecified disabling conditions. Very few studies were broad-based or national in scope. Representative samples were not obtained in many of the studies. A concerted effort was made to carefully review each study and assert the findings from those found to be methodologically sound. All of the studies were

examined to detect trends and consistency of results. Methodological deficiencies and variations probably account for some of the inconsistencies in the findings. However, this review does not address the methodological flaws in the research to any extent.

In general the review reveals that employers are much like the general population--they have had and continue to have reservations about workers with disabilities, even with the available evidence that they make valuable, competent workers. Employers are aware of the differences in persons with varying disabilities and differentially assess their abilities to some extent. However, stereotypes persist, especially in regard to severe physical disabilities and persons with mental illness and mental retardation. Employers are indeed a diverse group. As a result, there are few easy solutions to job development which can be offered to rehabilitation specialists. The findings of the review indicated that there are few hard and fast rules which can readily be applied to job development and placement of persons with disabilities.

As rehabilitation counselors and professional rehabilitation practitioners, the authors are committed to full participation by persons with disabilities in all phases of life, including work. We understand that this commitment may have colored our interpretations. We have attempted to provide our interpretations and reviews in an unbiased manner.

The concluding two chapters include a brief review of the most important findings with recommendations for action on the part of rehabilitation practitioners, policy-makers and workers with disabilities. Reviews and summaries have been provided in each chapter and are not repeated in the concluding chapter.

Employer Perspectives On Resources To Facilitate The Employment Of Workers With Disabilities

Interaction between the rehabilitation system and the private enterprise system has traditionally been impeded by a communication gap. While profit is a major measure of success in the business world, rehabilitation professionals primarily utilize human factors. The difference in perspective is particularly evident when rehabilitation practitioners expect employers to hire persons with disabilities, not because they can work but because work would serve a therapeutic purpose.

Despite the fact that the non-judgemental and accepting attitudes characteristic of the clinical setting are largely inappropriate for the work setting, rehabilitation specialists have often expressed the hope that employers could be educated to function more humanistically. Over twenty years ago, Olshansky (1961, p. 36) questioned the value of such humanitarian sentiment:

> Is it realistic to expect an employer to fulfill a role of entrepreneur as well as a role of quasi-therapist? And if he could, would this be useful to the handicapped person? What would be the attitudes of co-workers toward the "coddled" worker, who would certainly find his consequent alienation and isolation from fellow workers untherapeutic? Again, too, he would resent the differential treatment offered him by the employer, whose motivation would be suspect, since normal workers are not treated quasi-therapeutically.

However commendable humanitarian sentiment may be, Olshansky (1961) reported that such an outcome has never been likely because employers conceive their role to be that of maximizing the efficiency of their work force. Regardless of their personal preferences, employers tend to hire non-disabled workers and avoid those whose work capacity is in question.

Professionals have suggested that rehabilitation practitioners bridge the communication gap, using sales techniques with which employers are familiar to provide information about the work capacity of job candidates and local rehabilitation resources (Hart, 1962). Some have stressed that overselling may "serve to reinforce the employer's fears and prejudices for he recognizes the technique of overselling and suspecting an inferior product, he insulates himself against the hard sell approach" (Olshansky, 1961, p. 35).

More recently, professionals have advocated bridging the communication gap by forging a business-rehabilitation partnership. Bowe and Rochlin (1983) advise rehabilitation practitioners to bring the positive experiences of other firms to the

employers' attention, report on new, low-cost, high-impact technologies, and provide the "bridge" services to follow-up on placements to assure success. These advocates believe employers deserve accurate information about laws, regulations, reasonable accommodation aids and devices, and the capabilities of job-seekers who are disabled (Bowe & Rochlin, 1983). Offered such information and support, together with incentives such as tax credits for devices and direct payments for job training, the authors suggest that employers will likely overcome their historical reluctance to believe that "hiring the handicapped is good business".

If the business-rehabilitation communication gap is to be bridged, rehabilitation practitioners require accurate information from employers. In the past three and a half decades there have been limited and sporadic efforts to identify factors employers feel are important in employing workers with disabilities. Early surveys were limited in number and type of data collected. Traditionally, employers were asked questions such as: "Would you consider hiring an individual who is disabled? How many workers with disabilities do you presently employ? How does the disability affect production rates, attendance, safety, insurance, etc.?" Infrequently, employers were asked what types of resources or interventions were needed or desired by their organizations to increase the participation of workers with disabilities. Instead, resources and interventions were presented from a rehabilitation perspective at the conclusion of the survey report, with little or no attempt to verify their acceptability to employers. Only recently have surveys sought the employer's evaluation of resources and suggestions for interventions. The American Management Association (AMA) (Ellner & Bender, 1980) and Department of Labor (DOL) (Berkeley Planning Associates, 1982) surveys asked employers to identify acceptable and appropriate interventions that service providers could offer. Employers in these two studies were also asked to share information on techniques developed by their firms to facilitate the employment of workers with disabilities. Whether they were addressed from the employer's or the rehabilitation practitioner's perspective, resources that facilitate the employment of individuals with disabilities have been an important focus of surveys for more than 35 years.

Referral and Recruitment

One aspect of the employment process which is of major concern to employers is the availability of qualified applicants who are disabled. In the last ten years employers have had increasing experience in hiring individuals with disabilities; they have found that, like sources of non-disabled labor, some agencies that specialize in supplying applicants serve their purposes better than others.

Vocational Rehabilitation

When the AMA asked employers across the country to rate sources for job candidates with disabilities, state vocational rehabilitation (VR) departments received the best ratings (Ellner & Bender, 1980). Thirty-nine percent of the responding employers classified them as good, and 45% gave them an average rating. Also, the DOL survey of Federal contract employers found many recruiters actively working with VR agencies (Berkeley Planning Associates, 1982).

These responses corroborate earlier findings by Bauman and Yoder (1965). In Philadelphia, 68% of the study participants employing blind clerical, industrial, and service workers had been contacted by VR. Only one of the 236 respondents reported that relationships with the agency had been poor and only four indicated that the relationship could have been improved. In at least 25% of the cases, the agency and the company appeared to have worked together for five or more years.

Employers appear to differentiate VR from "give-away programs" (Green, 1981; Emener & McHargue, 1978). Many are positive about VR and do not express resentment toward pressure from them to hire workers with disabilities (Emener & McHargue, 1978).

In a Portland/San Francisco survey, employers stated they found contacts with state VR agencies most helpful in referring applicants (Zadny, 1980). Fifty-nine percent of the Portland participants had been contacted by VR with an average of 9.5 contacts. In San Francisco, 44% recalled being contacted with an average of 15.6 inquiries. The percentage of employers hiring workers with disabilities increased with contacts by VR. Large firms reported greater contact and hired more workers with disabilities.

Not all survey respondents have found VR to be a source of referrals for workers with disabilities. When canvassed, hospital laboratories in New York, New Jersey, and Pennsylvania reported that only 35 of 693 lab employees with disabilities and 6 of 54 trainees with disabilities had been referred by VR (National Committee, 1969). Many of the remaining 48 trainees seemed unaware of the assistance available to them through VR.

During a Los Angeles survey, the Veterans Administration Center reported that VR had not proved effective in meeting the employment needs of ex-mental patients (Salzberg, Wine, Seacat, & D'unger, 1961). After establishing a liaison with the hospital, none of the recommended patients was served by VR. However, this was not the case in Atlanta, where study participants were willing to hire ex-mental patients after participation in the VR program of the Georgia Mental Health Institute (Burden, 1970).

In general, employer surveys have shown that VR has

established a satisfactory referral relationship with many firms, particularly larger companies. However, improvement continues to be needed especially with populations of mentally ill and mentally retarded.

A survey of St. Louis manufacturers found that two-thirds of the respondents did not recall contacts by anyone on behalf of persons with mental retardation, although one-fourth of the participants indicated they hired workers who are mentally retarded (Bolanovich & Rasmussen, 1968). Most of these hirings occurred through the usual channels--employment office, walk-ins, replies to want ads, and referrals. Rehabilitation practitioners should note that a trend toward higher attitude scores was found with increasing experience with persons who are retarded. Almost half of the group indicating positive attitudes toward persons with retardation had such individuals working for their firms. Only 3% of the negative attitude group had such experience.

Community Sources

"Word of mouth" communication networks in the local community are commonly used by employers to locate job applicants. Family, friends and co-workers are regarded as valuable sources of information about potential employees. In addition, the reputation of the company is transmitted through the community by the same communication chain which encourages local individuals to apply for work.

Employers have found these factors to operate for prospects who are disabled just as they have for non-disabled persons. An early survey of industrial employers in Charlotte, North Carolina and New Haven, Connecticut found the three most frequently used sources of labor to be other employees, supervisors, and personal applications (Noland & Bakke, 1949). This trend continues with contemporary firms like Merck, Sharpe and Dohme focusing on individual recruitment of professionals who are disabled through contacts made by current employees and direct, personal applications (Berkeley Planning Associates, 1982). When canvassed, contemporary employers report that these continue to be important sources of workers with disabilities. AMA (Ellner & Bender, 1980) survey respondents concur with this--forty percent found applicant self-referrals a useful source of job candidates with disabilities.

Organized Labor

Survey participants have tended to report that organized labor has not taken an active role in the referral of job applicants. Employers in the DOL survey (Berkeley Planning Associates, 1982) reported the union's involvement to be passive while 81% of the AMA (Ellner & Bender, 1980) respondents rated it as "poor". Employers report that organized labor does not perceive referral and recruitment of new job candidates to be part

of its responsibility. Employers are reportedly dissuaded from employing applicants with disabilities by the inflexibility of unions in accepting such practices as bypassing entry level positions or restructuring jobs in order to place some workers with disabilities in jobs which they can perform. Accommodative practices like these can conflict with union seniority regulations.

Professional and Advocacy Groups

Some employers do not regard advocacy organizations as viable contact sources for job candidates with disabilities. They find these groups to be below average in performance--not enough applicants are referred and many are thought to be unprepared to meet the demands of the work environment. Some study participants have reportedly felt pressured by such organizations to accept applicants just because they are disabled. For example, 44% of the AMA respondents rated advocacy groups as below average in recommending job applicants while only 4.3% of the respondents felt they were very effective (Ellner & Bender, 1980).

On the other hand, organizations which have combined advocacy with vocational training have been well received. In addressing the quality of professional and technical organizations, the EEO manager of corporate personnel at Hewlett-Packard stated: "We need personnel who are technically trained. We get much better candidates from such outfits as the Center for Independent Living and the Rochester School for the Deaf" (Ellner & Bender, 1980, p. 42). The National Technical Institute for the Deaf at the Rochester Institute of Technology matches education to employment goals and their graduates are sought out without concern for distance (Ellner & Bender, 1980).

Participants in the DOL survey also report satisfactory liaisons with a variety of professional organizations (Berkeley Planning Associates, 1982). For example, Hewlett-Packard utilizes programs such as Goodwill Industries and the computer training program at the Center for Independent Living; IBM with the National Technical Institute for the Deaf; Merck, Sharpe and Dohme with National Industries for the Blind; and Storage Technology Corporation with a vocational technical school which trains workers with physical and mental disabilities in production skills.

In summary, advocacy groups have not been viewed positively by some employers, apparently because of inappropriate referrals. On the other hand, when programs such as the Center for Independent Living combined advocacy with vocational training, they were well received, as were professional and technical training programs.

Other External Resources

There have been few surveys canvassing respondents about other sources of job candidates. While not addressing referral per se, a West Virginia survey of service organizations found that 65% were opposed to the government providing all employment for persons with mental retardation (Phelps, 1965). These employers from hotel/motel, restaurant, hospital, and laundry settings felt they should be able to hire some workers with mental retardation.

More to the point, the AMA survey reported 48% of its study participants rated government employment agencies as average, and 42% rated them as poor sources of job candidates with disabilities. Fifty-six percent of the respondents rated other government manpower agencies as poor referral sources while 33% gave them a rating of average (Ellner & Bender, 1980).

Private employment agencies are regarded as poor sources of disabled job applicants. Sixty-eight percent of the respondents in the AMA survey gave this rating, reporting they used such agencies infrequently (Ellner & Bender, 1980). In Boston, only 14% of employers who hired ex-mental patients used private employment agencies (Olshansky, Grob, & Malamud, 1958). Of the 12 sources of labor used by industries in Charlotte, North Carolina, and New Haven, Connecticut, private employment exchanges ranked ninth (Noland & Bakke, 1949). In Philadelphia, only 2% of the employers who hired workers who are blind had been contacted by private employment agencies (Bauman & Yoder, 1965).

An exception to these negative evaluations is the report of successful liaisons with Projects With Industry. IBM and Raytheon were involved with the Electronics Industries Foundation Project with Industry (EIF/PWI), a project which involves electronics and related companies (Berkeley Planning Associates, 1982). IBM works closely with the EIF/PWI which conducts placement, identifies employment needs, and helps to develop training programs to meet the needs.

Internal Programs

During the 1960's employers began to develop internal programs to recruit workers with disabilities. More recently, the AMA survey found some participating firms maintained outreach programs to identify workers with disabilities (Ellner & Bender, 1980). These programs are characterized by contacts with a variety of sources. The following are cited as examples of successful corporate outreach programs (Ellner & Bender, 1980, pp. 40-41):

> The Lockheed Corporation participates in many community programs. Company representatives are actively involved with such organizations as Goodwill, the National Alliance

of Businessmen, and Projects with Industry, to name a few. They also enlist the assistance and support of recruitment sources, such as the Department of Rehabilitation and the California League of the Handicapped. Contacts are considerable, including 24 colleges, and the media, which is used to advertise Lockheed's commitment to non-discrimination in employment.

Kaiser is in contact with a wide variety of agencies, groups, and universities. Directives to all line and staff managers in all facilities advise on what is to be done to open employment opportunities for the handicapped. It is recognized that every plant has individual problems, and that location determines to a great extent the contacts that are available. But in general, plants are in contact with state employment services, state vocational rehabilitation agencies, college placement centers, in fact, every possible avenue of communication to provide access to jobs for the handicapped.

Case studies of ten large Federal contractors found corporate college recruiting to be a common method for locating individuals with disabilities at the professional level (Berkeley Planning Associates, 1982).

Some organizations have developed in-house methods of handling referrals. The Storage Technology Corporation assigns recruiters to act as liaisons with specific agencies (e.g., Equal Employment Opportunity and Affirmative Action agencies) (Berkeley Planning Associates, 1982).

What Employers Need from Referral Sources

Information Requirements

If the referral process is to be effective, agencies placing people with disabilities should understand business operations. Employers express the need for caution in dealing with external organizations because they feel such groups do not understand their needs (Ellner & Bender, 1980; Mithaug, 1980; National Committee, 1969; & Zadny, 1980). This concern is voiced by an EEO officer at Hewlett-Packard: "I myself come from a rehabilitation position, so I know both sides of the story. I think the state rehabilitation people generally don't know what is going on in industry. They should spend more time learning what is going on and what our placement requirements are. Of course, they are overworked, have too heavy a client load, and cannot devote the necessary time to each individual" (Ellner & Bender, 1980, p. 42).

The National Committee for Careers in Medical Technology's (1969) three state study of hospital laboratories illustrated how this lack of understanding can affect the employment of indivi-

duals who are disabled. It was discovered that rehabilitation counselors lacked a good understanding of the training needed for jobs in medical laboratories. They were reported to be uninformed about laboratory training schools and the academic background required for admission. As a result, only 35 of the 693 laboratory employees with disabilities and 6 of the 54 trainees with disabilities were referred by VR agencies; VR referrals were more often trained at a lower level and 60% were working at the lowest level of lab assistant.

The referral process can be rendered ineffective when referral agencies lack information about disability. Smith (1964) found that while employment counselors in the Colorado State Employment Services had favorable attitudes toward clients with mental retardation, they lacked a great deal of the factual information needed to provide services. Their knowledge of the disability was acquired through limited contact with special education programs. The majority were admittedly uninformed about such programs and the training they provide. Only 31% felt they were sufficiently informed, 38% had working experience with the programs, and of the 62% without experience, half were from communities without such programs in operation. Understandably, most felt their employment counseling experience with this population had been unsuccessful.

Survey respondents have indicated a lack of information about services community agencies and institutions can provide to enhance the referral process (Akabas, 1976; Bluett & Hill, 1946; Philips, 1975). At referral, employers need to know what additional services can be provided or where they can be obtained. Such information would enable the employer to make a well-informed appraisal of the applicant's potential. Survey respondents indicated they would welcome such information (Bluett & Hill, 1946; Emener & McHargue, 1978; Green, 1981).

Employers indicate a desire for specific information about applicants from the referral agency. They request that VR counselors discuss client-related matters - the client's specific disability, impact of the disability on job performance, limitations in mobility, and the extent of the disability (Emener & McHargue, 1978; Green, 1981). If the applicant has had a mental illness, the employer is anxious to know what to expect if a relapse occurs and what danger signs to look for (Hart, 1965).

Employers reportedly desire to be contacted prior to case closure, when closure occurs, and when the VR counselor terminates services (Emener & McHargue, 1978).

Employers considering applicants from some disability groups request even more extensive information from the referral agency, i.e., for ex-mental patients information such as physician's recommendations, hospital records, medical information, and assurance (Olshansky et al, 1958). Because of this desire for

specific information, almost 40% of large Boston area manufacturers preferred to hire ex-mental patients directly from hospitals (Olshansky et al, 1958).

Availability of Qualified Applicants with Disabilities

The employer's agreement to hire a worker with a disability is directly related to his/her need for the applicant's skills (Zadny, 1980). Department of Labor survey respondents indicated that applicants with disabilities tended to lack technical skills in high demand--they are perceived to have limited training or poor training, even when referred by programs designed to prepare them for employment. For example, employers made the following observations (Berkeley Planning Associates, 1982, p. 68):

> In working with some groups offering training to the handicapped, we have run into a reluctance because of budget constraints upon these groups to utilize up-to-date techniques, etc. They are considerably behind the state of the art.
>
> We would be very happy to hire more handicapped people, but we need to be made aware of more technically trained people.

This was further verified by a participant in the AMA survey: "As a result of the technical nature of our manufacturing operations, our division has had few opportunities to place the unskilled client" (Ellner & Bender, 1980, p. 39).

Competitive skills are deemed essential by employers who are prepared to hire workers with disabilities only to the extent that they are at least as qualified as other applicants (Berkeley Planning Associates, 1982; Zadny, 1980). Companies seek applicants with good work habits who are job ready (Stewart, 1977). Participants in a survey of southern states were unwilling to hire individuals who are mentally retarded who did not have these prerequisites (Smith, 1981). In addition, employers are interested in applicants with positive work attitudes and motivation and rated such criteria higher than the need to possess technical skills (Stewart, 1977).

Some study participants reported an "iron curtain" existed between referral agencies and employers (Margolin, 1961). One employer expressed resentment that he was sent ex-mental patients who were poor work prospects and indicated that "because a patient is ready for discharge does not necessarily mean he/she is ready for work" and "unless the individual has been prepared and work-conditioned for such situations, rehabilitation should not burden industry by sending them out to work" (Margolin, 1961, p. 114).

Even firms that have established effective liaisons with

referral agencies indicate a shortage of qualified applicants with disabilities to be a major barrier (Berkeley Planning Associates, 1982). This is only partially due to the limited number being trained in high demand fields. Study participants suggested that two contributing factors are lack of understanding by the referral agency of the labor needs of employers, and lack of knowledge about the sectors of industry most likely to hire individuals with disabilities (Berkeley Planning Associates, 1982).

Problems can also occur when an applicant with a disability refers himself/herself through personal application. Personnel in one survey complained about the "unwillingness of young handicapped workers" to begin at the bottom and take the time to learn a trade, and also cited a "tendency of some new handicapped employees to exaggerate their skills and productivity" (Hart, 1962, p. 145).

A number of survey respondents have proposed solutions to increase the number of qualified applicants with disabilities. The most common suggestion is that employability be improved through vocational training (Bluett & Hill, 1946; Florian, 1978; Margolin, 1961; & Olshansky, et al, 1958).

Demands of the Screening Process

In the past, some employers hesitated to show receptivity toward persons with disabilities due to the fear that such action would "result in a long line of disabled people waiting to see them the following morning" (Hart, 1962, p. 143). Employers report a desire for referral agencies to screen applicants carefully. Agencies who deliver two or three prospects for a job opening are likely to be well received. Some employers prefer the agency to report on the applicant's work, education, and medical background before referral (Hart, 1962). While some employers preferred brief, efficient referral contacts, they did not complain that they received too many contacts (Zadny, 1980).

Once an applicant has been screened, employers have expressed a preference for talking with the applicant alone. During the Olshansky, et al. (1958) survey of Boston employers, only 12 of the 100 respondents were interested in the applicant being accompanied by a referral agency representative. Some participants felt a second person could inhibit their talking with the applicant and could possibly arouse the curiosity of other workers. In their opinion, coming to the interview alone was significant evidence that the person was able to work, and having an agency representative present suggested a lack of readiness to undertake regular employment. Also, some employers were concerned that an agency employee might exert undue pressure for acceptance of the job seeker.

This review indicates that employers use and value both external and internal resources for referral and recruitment of

job applicants with disabilities. As reported above, surveys reveal the specific needs employers have, and areas where rehabilitation practitioners can be of service.

Resources for Accommodation

Internal Specialists

In some of the firms in the Department of Labor survey the major accommodation for workers with disabilities was the assignment of a representative to implement Affirmative Action and Equal Employment Opportunity (EEO) programs (Berkeley Planning Associates, 1982). The majority of organizations do not have a separate Affirmative Action program for workers with disabilities. Most of the AMA respondents (72.5%) reported that their employment program for workers with disabilities was incorporated in their overall EEO program (Ellner & Bender, 1980). While some major corporations do have separate Affirmative Action programs for workers with disabilities, the person responsible for the program usually has other personnel responsibilities.

Confirmation that the 503 and 402 programs (Rehabilitation Act of 1973, as amended, and the Vietnam Era Veterans Readjustment Assistance Act of 1974) were nested in the larger EEO programs was obtained from information on the practices of Lockheed and IBM (Ellner & Bender, 1980). Such programs are effective because of the attention an internal specialist can devote to a job applicant or employee's problems rather than any particular expertise in accommodation.

A specialist can acquire knowledge of regulations affecting accommodation, information on accommodation experiences of other employers, community resources, and the needs of disabled workers and management. Such internal specialists also indicate a strong commitment on the part of top management to hiring and accommodating workers with disabilities.

The DOL survey revealed that such specialists make a significant contribution through reviewing and tracking applications of applicants with disabilities (Berkeley Planning Associates, 1982). This "special handling" included the following (Berkeley Planning Associates, 1982, p. 76):

1. Screening applicants ahead of time;
2. Weeding out unqualified applicants;
3. Compiling references and transcripts to accompany applications, and
4. Discussing the applicant's qualifications, limitations, and solutions to them with the personnel manager prior to the interview.

"Selective placement committees" have been used to explore job opportunities for applicants not initially accepted by the organization. Selective placement has been found to be a common form of accommodation (Berkeley Planning Associates, 1982). Matching worker to job permits assignment where environmental or job design changes are minimized. Selective placement was found to be more feasible for large firms with a diversity of jobs. However, with smaller employers, matching worker skills to jobs was commonly used for accommodation.

Survey respondents from an Air Force installation advocated more care in placing employees with disabilities, careful consideration of the degree of limitation, and permanence of the disability (Simon, 1963).

Respondents with specialized engineering and maintenance groups were better able to provide accommodation help to managers (Berkeley Planning Associates, 1982). However, only the largest employers routinely had internal engineering and technical expertise. Some employers reportedly used employees with disabilities as "consultants" on accessibility.

Ellner and Bender (1980, p. 52) have identified the following examples of internal accommodation practices:

> IBM provides many services that are not required, such as purchasing orthopedic chairs and special wheel chairs, and optacons. The firm has also modified some of its products to accommodate the handicapped, such as electric braille typewriters with special erasing keys to minimize correcting effort.
>
> At Hewlett-Packard, company engineers are now working on an improvement of the optacon, which would make it possible to bypass the camera and feed signals directly into the circuitry. It would then be possible to link Hewlett-Packard test instruments directly with the optacon. This would provide sight impaired employees with even greater capability than they currently have.
>
> In the "Silicon Valley" area near San Francisco, corporations such as Varian and Hewlett-Packard are assisting the handicapped by arranging special transportation by means of car and van pools.

External Resources

Employers in the DOL survey infrequently used outside accommodation resources (Berkeley Planning Associates, 1982). However, service specialists for populations such as persons who are blind or deaf were used because of knowledge of available assistive devices.

Vocational rehabilitation professionals have also assisted employers in developing accommodation strategies (Berkeley Planning Associates, 1982; Ellner & Bender, 1980). Sixty-two percent of the AMA respondents found VR agencies to be an average source of assistance, while 13% felt they were good providers of accommodation aid.

Technical assistance, when it is available, can be an incentive for hiring and accommodating workers with disabilities (Berkeley Planning Associates, 1982). AMA survey participants found VR to be a good provider of technical assistance, with 48% rating them as average (Ellner & Bender, 1980).

The Department of Labor provides technical assistance to employers of workers who are disabled. Firms with limited experience with workers with disabilities tended to regard technical assistance as an incentive for increased activity. Those firms with more experience reported some reservations. Some were reticent about accepting assistance because they were suspect of regulatory agencies.

One of the most effective strategies used to facilitate the placement of individuals with severe disabilities is follow-up by the referring agency. More importantly, the most effective aspect of a referral agency relationship has been regular follow-up with both employee and employer. Employers of ex-mental patients, in particular, appreciate the fact that they can contact an agency representative if evidence of unusual behavior occurs (Margolin, 1961; Emener & McHargue, 1978).

The DOL survey found that accommodation needs are often overlooked during referral, and surface later after the person is employed (Berkeley Planning Associates, 1982). Active contact with outside agencies resulted in greater likelihood of employer accommodation of the employee--especially if a long-term relationship was established, and the agency provided accommodation suggestions, and demonstrated understanding of the worker's skills and limitations.

The DOL survey further indicates that a major gap exists in the network of "disability" services, with the limited availability of rehabilitation engineers (Berkeley Planning Associates, 1982). Massachusetts and California VR programs have used rehabilitation engineers as resources for VR counselors. Unfortunately, available resources in rehabilitation engineering are limited.

Staff Training Resources

An early survey indicated that information sharing programs between business and rehabilitation could facilitate the employment of workers with disabilities (Bluett & Hill, 1946). Some studies have investigated the effects of educational cam-

paigns on employers' attitudes toward workers with disabilities (Sands & Zalkind, 1972). Until recently, however, few staff training activities had been reported in surveys of employers.

Internal Programs

When AMA survey respondents were asked about educational or "awareness" programs to help employees understand problems experienced by workers with disabilities, most respondents reported that neither supervisors (78.6%) nor workers (94%) received such training (Ellner & Bender, 1980). However, many companies had awareness programs for management level personnel.

Participants in the DOL survey reported that "disability awareness" programs for supervisors and co-workers on providing appropriate practices are sometimes used (18.0% of all accommodation practices) (Berkeley Planning Associates, 1982). Companies in the survey have developed a variety of staff training programs. Survey participants felt that Affirmative Action training of supervisors provided by the firm was more effective than external advertising campaigns with the theme "it is good business to hire the handicapped".

A number of awareness training programs in the form of video presentations serve to educate employees about disabilities through messages emphasizing (Berkeley Planning Associates, 1982, p. 81-82):

* That disabled workers are people first and disabled second;

* That disabled workers are no less safe than their non-disabled co-workers;

* That major barriers arise, not from handicaps, but from negative attitudes resulting from a lack of knowledge about disability and a lack of contact with disabled people.

For example, du Pont uses a video-tape of workers with disabilities illustrating their experience in detail; Hewlett-Packard developed "Just Three People" a film depicting the working life of three employees who are severely disabled. It honestly portrays co-workers' hesitations and a manager's doubts about promoting a worker who is deaf to a supervisory position, and clearly illustrates how the company has benefited from the employment of workers with disabilities.

Union Carbide Corporation-Nuclear Division has produced a video called "They've Traveled Far to Reach Our Door--Can We Do Less Than Open It?", depicting workers with disabilities and their supervisors and dealing with safety, performance, and attitudinal barriers. The film illustrates how initial reluctance to hire persons with disabilities fades as a result of experience.

Inter-Agency Programs

The National Committee for Careers in Medical Technology (1969) study of hospital laboratory employment for persons with disabilities illustrated the importance of personal contact and information sharing between professional groups. As the project progressed, it was revealed that rehabilitation counselors lacked understanding of necessary job training for work in medical laboratories; many were unaware of approved training schools, and the background required for admission. Also, laboratory directors with no experience with workers with disabilities underestimated their capabilities and abilities to compensate for limitations. These laboratory administrators did not understand how VR centers operated or why practitioners required knowledge of laboratory environments to relate to their client's limitations.

A series of meetings among laboratory directors, rehabilitation counselors, and teaching supervisors from local hospitals was held. Frank discussions brought to light the reasons for misunderstanding between the groups. Laboratory personnel reported that applicants who were disabled often lacked the academic background for appropriate training, and did not appear to have sufficient motivation. Counselors countered that their clients were frequently stopped by the personnel office as soon as a disability was revealed, leaving little chance for evaluation of a client's suitability for laboratory training. The frequent training related questions at each meeting indicated that few counselors had contact with hospital training schools; and the salary level of lab workers with professional training was surprising to many.

For three years following this collaborative effort there was an upward trend in the number of schools training students with disabilities, and a significant increase in the percentage of VR referred students. By 1969, one of the three participating states had initiated educational programs in medical laboratory careers. These results illustrate the success of inter-agency cooperation in facilitating the employability of individuals with disabilities.

Another example of inter-agency staff training was reported in the DOL survey (Berkeley Planning Associates, 1982). Counselors from the Tennessee Division of Vocational Rehabilitation and company representatives discussed job opportunities at Union Carbide Corporation-Nuclear Division (UCC-ND); and a liaison was formed to review referrals and select applicants. Although UCC-ND hired about 13% of the applicants referred by VR, inappropriate referrals continued to be received. Follow-up meetings were held focusing on reasons for not employing some VR referrals. VR counselors were given feedback on problem applicants, and a presentation of job openings was shown, highlighting the skills needed for the openings.

Conferences continued to be held with a VR liaison to review potential applicants and make more appropriate referrals.

A further example of productive inter-agency collaboration was reported by Akabas (1976). The Industrial Social Welfare Center at Columbia University and the New York Chamber of Commerce and Industry jointly recognized that a body of accommodation experience existed and that many corporations employed workers with disabilities, especially employees who became incapacitated. Both organizations felt it was desirable for the employer and rehabilitation representatives to share knowledge and experience. A conference was held bringing together employers and rehabilitation practitioners.

Chamber of Commerce representatives emphasized that an Affirmative Action program for workers with disabilities should not be based on humanitarian appeals. They wished to develop a conference tone permitting informational sharing with the rationale that Affirmative Action is the law of the land, and employers would seek to create an image of compliance.

The conference included reviews of regulations by public representatives and presentations of successful past experiences by Chamber members. Workshops were held for policy, training, insurance and benefits, and preparation of an affirmative action plan. Practical approaches were emphasized. Each workshop brought business, government, and rehabilitation representatives together to learn how they could be helpful to each other.

During the conference, it became apparent that a lack of information existed in the corporate world, preventing a number of organizations from developing a plan to hire workers with disabilities. As one businessman expressed it: "We don't know in which jobs to hire the handicapped; we need someone around, not to give us a list, but to help us think about restructuring" (Akabas, 1976, p. 23). Industry and business representatives formulated the following list of areas in which they lacked information (Akabas, 1976, p. 23):

1. The variety of disabling conditions and their impact.
2. The rehabilitation process and the nature and use of assistive devices.
3. The nature of architectural barriers and possible remedies.
4. Job restructuring techniques and other methods of accommodation.
5. Sources of assistance for a company.

Other needs identified were training for supervisory staff and personnel in insurance and benefits, confidentiality, procedures for monitoring and changing policy, as well as accommodations. Concern was expressed about ambiguities and information gaps in the guidelines for Affirmative Action.

The needs identified by business representatives resulted in the acknowledgement of the following responsibilities for rehabilitation agencies (Akabas, 1976, p. 23):

1. Information on a host of issues.
2. Job candidates.
3. Evaluation and suggested work activities for those with obvious disabilities.
4. Help in retraining those who because of illness are no longer able to cope with previous assignments.
5. Funding of major expenses incurred in hiring a particular disabled individual, e.g., medical care, tools, etc.
6. Training of corporate staff concerning behavior toward appropriate expectations of a disabled employee.

Participants felt that the conference brought the field of rehabilitation into closer contact with the world of business.

Summary

This chapter presents a review of employer perspectives on the resources available for recruiting and retaining workers with disabilities--vocational rehabilitation, community resources, organized labor, and advocacy groups. The problems employers identified with these resources provide a comprehensive picture of the manner in which various types of organizations are reacting to and gearing up for workers with disabilities.

In general, survey participants found VR agencies to be good sources of referrals. Such programs were regarded as employment-oriented, as opposed to income maintenance programs which many employers view as give-aways. A growing trend among the larger organizations to establish internal procedures to recruit workers with disabilities was identified. This usually involved expanding established recruitment activities to include organizations and settings where recruits with disabilities could be located. VR practitioners can profit from this trend by providing technical assistance to employers involved in the development of internal programs.

The limited evidence from employers regarding the use of labor unions for recruitment of workers with disabilities is not positive; employers tend to see unions as protecting their membership rather than facilitating the employment of new workers who are disabled. One of the barriers seems to be seniority provisions which prevent employers from placing applicants above entry levels when they are not able to perform the tasks for entry level jobs. Rehabilitation agencies and practitioners need to approach labor unions with assistance in removing such barriers. The use of local labor leaders on rehabilitation advisory committees is one possible mechanism. Presentations at

local labor meetings could bring about greater awareness of the need to negotiate procedures which facilitate the employment of workers with disabilities.

Outreach efforts from the AFL-CIO Human Resources Development Institute and their Projects with Industry programs have facilitated the employment of workers with disabilities around the country. The AFL-CIO has encouraged the development of union/management committees to deal with seniority, job restructuring, and other issues involved in implementing job programs for workers who are disabled. The Human Resources Development Institute may be used as an information and technical assistance resource for practitioners dealing with issues concerning local unions. Field offices of the Institute are located around the country in over fifty cities.

Employers' reactions to other resource groups vary. PWI programs, such as the one operated by the Electronics Industries Foundation, are receiving favorable attention especially as PWI outreach efforts bring employers onto advisory boards. In some areas the PWI programs are operated directly by employer trade associations and labor unions. Such projects involve extensive direct contact and interaction with employers in order to facilitate employment. This process provides a unique opportunity for the rehabilitation specialist to gain an understanding of the current demands of the work environment.

Employers did not regard public and private employment agencies as sources of applicants with disabilities. The effectiveness of advocacy groups depended on their ability to refer skilled workers. Professional and technical institutions were often considered helpful, especially, if they were vocationally-oriented. Institutions such as the Rochester Technical Institute for the Deaf have an excellent reputation for providing qualified workers with disabilities.

Employers have voiced concerns about resources in terms of the problems they perceive in obtaining information, availability of qualified job applicants with disabilities, and the demands of the screening process.

Historically, employers have utilized informal networks for recruiting employees. Available research indicates that most positions are filled through informal contact with supervisors, current employees and social or business associates. Rehabilitation practitioners can capitalize on this network by soliciting leads from contacts in employment settings. They can also instruct clients in the way such networks operate, advising them that their best resource in identifying potential job openings may be their own family members and friends. Rehabilitation specialists need to remember that employers also use informal networks involving colleagues in business and industry. They also look to rehabilitation organizations for

advance information helpful in the selection and screening process.

Within the business world, marketing specialists are regarded as knowledgable about the products and services they represent. Therefore, rehabilitation specialists are expected to be knowledgeable and able to share relevant information about clients and services. They are expected to offer a pool of qualified, job ready applicants. Emloyers can spot a "sales promotion" that does not represent a quality product. They report that rehabilitation service providers do not know enough about the world of work and the requirements of employment settings. In order to facilitate transactions with the business world, rehabilitation practitioners need to emulate the marketing specialist by becoming knowledgeable about employers' needs.

Surveys show that, when practitioners are referring applicants, employers desire advance information about the disability and specific functional skills in order to prepare for the interview. Also, employers have expressed a need for follow-up visits and contacts to assist with problems which may arise after placement. Such follow-ups may be critical in some types of disabilities such as mental illness.

The results of limited surveys indicate that employers perceive some applicants with disabilities to be poor candidates because of the lack of work and work-related skills. This underscores the need for vocational preparation and work readiness training to enable applicants who are disabled to successfully compete with other applicants.

These findings indicate that rehabilitation practitioners must offer a quality product if they are to successfully transact with the business world. In order to do this they must have accurate information about each employer's specific needs. Much of this knowledge can be acquired directly from the employer and in the process personal relationships can be forged to include the rehabilitation practitioner within the informal network. From this vantage point transactions can be more effectively executed.

Accommodations are playing an increasing role in successful placement and long-term maintenance on the job. There is an evident need for technical assistance from rehabilitation engineers and other specialists to assist employers, particularly smaller employers. Rehabilitation organizations could be valuable resources if such personnel were locally available or were provided through consultant arrangements. Massachusetts and California VR agencies have experimented with such arrangements and their experience should be shared. In all probability, only larger employers will be able to provide internal specialists in rehabilitation engineering. Therefore, the need for VR to offer such assistance is important if accommodation is to be facilitated.

Because of the availability of the DOL study on accommodations, it was possible to review recent survey data in this area (Berkeley Planning Associates, 1982). The variety of resource possibilities to facilitate job accommodations covered in this literature review coincides with the implementation of the Job Accommodation Network (JAN), a joint effort of the National Institute for Handicapped Research, the President's Committee on Employment of the Handicapped, and the West Virginia Research and Training Center. This service should facilitate information sharing about accommodations throughout the country. VR practitioners who establish themselves as part of the informal network of their community can share this information with employers as it is received.

The assignment of internal specialists to facilitate the employment and accommodation of workers with disabilities has been quite successful. Accommodations run the gamut from selective placement, the most common form, to physical modifications in the work place. Employers are only beginning to use outside resources such as VR agency personnel to assist with job accommodations. This is in part because of limited knowledge of these resources and concerns about bringing government personnel into the organization. VR agencies should capitalize on their positive image with employers and provide a variety of technical assistance services in accommodations and other areas.

A number of employers have developed their own disability awareness programs for use in staff development and new employee orientation. These are usually limited to large, national organizations. Employers such as du Pont and Hewlett Packard have developed awareness programs with aids such as video tapes on workers with disabilities and their contributions to the organizations. These media prototypes could be used by VR organizations in the development of programs for employers who cannot afford to develop such systems.

Surveys show that employers are participating in conferences and workshops to share information and concerns about workers who are disabled, and issues such as recruitment and selection. Conferences such as the one sponsored by the New York Chamber of Commerce have drawn considerable numbers of employers actively interested in accommodating workers with disabilities. VR agencies could serve as catalysts for the organization of such conferences to bring employers together.

There is a growing interest in forming bridges between business and industry and rehabilitation. In addressing this issue, Jay Rochlin, former AT&T Human Resources Manager, now on loan to the President's Committee on Employment of the Handicapped, stated that "The business of business is business" to underscore the realities of the work world (Bowe & Rochlin, 1983, p. 43). According to Rochlin, "business has never been, and never will be in the rehabilitation business." Employers look to someone whose

business is rehabilitation for assistance with workers with disabilities (Pati & Adkins, 1980). However, employers may be as apprehensive about approaching rehabilitation organizations as rehabilitation is about approaching business (Bowe & Rochlin, 1983).

Such concerns have stimulated the growth of programs that anticipate employers' requirements. The Employer Account Strategy was developed through a unique partnership between the private sector and state government. The Times Mirror Company, the California Department of Rehabilitation, and the California Institute on Human Services of Sonoma State University (Galloway, 1982) sponsored a project to facilitate the employment of persons with disabilities. During this collaborative effort, the partners developed a model program to help government and community service agencies work more effectively with employers when placing workers with disabilities in private sector jobs. Utilizing methods developed in the fields of marketing and sales, rehabilitation counselors meet the needs of employers who want trained and capable employees, and clients with disabilities who want meaningful jobs in mainstream settings.

The strategy emphasizes the establishment of mutually beneficial arrangements in which a rehabilitation agency offers a package of services to an employer in exchange for improved employment opportunities for the agency's clients. In addition to providing employer accounts with help in recruiting capable employees, the package recognizes that employers may also need other services (Galloway, 1982, p. 2):

* consultation on Affirmative Action and non-discrimination hiring policies and practices;
* help acquiring special tax incentives and wage subsidies;
* consultation on job modifications;
* advice on barrier removal;
* disability awareness training for employees; and
* help with "troubled employees" among the employer's current work force.

The Business-Rehabilitation Partnership (Bowe & Rochlin, 1983) also outlines strategies aimed at building a continuing, long term partnership between business and agencies that serve individuals with disabilities. The authors point out "that personal contact is the sine qua non of success in making the partnership work" (Bowe & Rochlin, 1983, p. 47). They cite Joseph H. Owens, Executive Director of the Council of State Administrators of Vocational Rehabilitation: "Personal relationships at the top

and at the practitioner level are the key. When the agency administrator and staff members and business people develop sustained relationships built upon mutual trust and respect, a continuing partnership will emerge" (Bowe & Rochlin, 1983, p. 47).

Advisory councils composed of representatives from local business and rehabilitation organizations are being used effectively across the country to establish a partnership between the two sectors. These business advisory councils provide a vehicle for the sharing of information--keeping employers informed of the availability of skilled disabled people and rehabilitation practitioners informed of priority areas in training and employment.

The business advisory council's potential depends on high visibility in the business, rehabilitation, and general community as well as active involvement from a core group of enthusiastic people from all sides who are committed to the project's success and who have substantial resource contacts in the community as well as the skills to use those contacts productively.

The potential of these reciprocal relationships is worth pursuing. The Research and Training Center associated with the Human Resources Center on Long Island has taken a leadership role in the development and study of such councils.

Another relatively new strategy in place in several states including Virginia, Oregon and Illinois is supported employment. These programs have enabled more severely disabled individuals to enter the work force with continuing support from job coaches and other services. Demonstration projects in a variety of settings have shown these programs to be successful.

These and other strategies can help to form a bridge between the world of business and the world of rehabilitation. They can provide a vital link between employers and service agencies and facilitate partnerships that make it possible to successfully meet the needs of both employers and disabled job seekers.

External Influences

While there are a number of internal factors which influence the hiring, accommodation and advancement of individuals with disabilities, external factors also influence their employment. Two of the most pervasive factors are Federal legislation and labor unions. Each influences employers who are covered by the affirmative action provisions of the Rehabilitation Act of 1973 or have contracts with organized labor. Federal contractors are required to implement affirmative action programs for persons with disabilities. This has had a definite and positive effect on the employment of workers who are disabled and has resulted in major initiatives by large contractors in particular. Labor unions have contractual agreements with employers regarding access to work and maintenance in the workforce. Their cooperation in facilitating the employment of workers with disabilities can make a significant difference in the ability of the employer to integrate the worker.

Federal Contracts

Since 1973, Section 503 of the Rehabilitation Act has affected most Federal contractors, as well as employers who anticipate doing business with the government. Employers with Federal contracts of $2,500 or more must include an Affirmative Action clause in each contract, subcontract, or modification, renewal, or extension of any contract that lacks such a clause.

When firms are bound by such requirements, there appears to be more willingness to hire and accommodate workers with disabilities. The DOL survey found that firms dependent on government contracts or under pressure from DOL enforcement officials were more likely to undertake frequent and extensive accommodations (Berkeley Planning Associates, 1982). Survey participants reporting the highest percentages of revenues from federal contracts were over-represented in the group of firms with the highest percentage of workers with disabilities.

Government regulations have also had an impact on physical accessibility. The resulting physical access has, in turn, increased the prevalence of hiring and accommodation of workers with disabilities.

When the DOL survey canvassed employers about the incentive value of various options they found the following types were considered attractive: tax credits (65%), placement by VR (64%), free technical assistance (56%), technical training and work experience for persons with disabilities (54%), increased enforcement of Affirmative Action regulations (48%), information about the advantages and profitability of hiring workers with disabilities (36%), and wage subsidies for workers with disabilities (34%) (Berkeley Planning Associates, 1982). When firms were asked to indicate the most important incentives, tax credits were

identified by 42%, placement efforts by 27%, technical assistance and specialized training by 25%, and Affirmative Action enforcements by 23%.

The DOL survey also analyzed responses by firm size and type of industry (Berkeley Planning Associates, 1982). No significant differences were found among types of industries; large firms were least interested in tax credits, wage subsidies, specialized training, and provision of information and they disproportionately cited placement efforts and Affirmative Action enforcement as incentives. Small firms cited tax credits most frequently, followed by placement efforts.

Survey participants hiring more workers with disabilities (more than 5% of the work force) cited technical training, placement efforts and tax credits as important. Firms hiring few workers with disabilities (less than 3% of the work force) found tax credits, placement efforts and technical assistance to be important.

A different pattern emerged when firms were grouped by the extent of their past accommodation experience. Companies with less accommodative experience ranked options as follows: tax credits (79%), placement efforts (78%), specialized training (78%), technical assistance (65%), Affirmative Action enforcement (65%), wage subsidies (59%), and providing information (52%). Companies with extensive experience in accommodation ranked the options as follows: placement efforts (77%), tax credits (76%), specialized training (71%), technical assistance (62%), Affirmative Action enforcement (47%), providing information (43%) and wage subsidies (39%).

In each of the preceeding analyses, tax credits emerged as the preferred option for facilitating the employment of workers with disabilities. Employers indicated that tax credits permitted them to procure more expensive equipment and environmental adaptations that might encourage them to hire more applicants with severe disabilities. This may become even more significant as the limited resources available to Federally funded programs, such as state VR agencies to pay for job accommodations, are reduced even further. It has been stressed repeatedly that in order for tax credit programs to be incentives, it is necessary to establish a smooth and simple system involving minimal red tape. Many firms do not currently take advantage of existing tax credits because "they are more trouble than they're worth" (Berkeley Planning Associates, 1982, p. 100). This perception involves more than just the actual paperwork required. For many firms, "getting involved" in a tax credit program entailed delays in processing, increased chances for mistakes, audits and increased monitoring. Although one firm suggested that the amount of money currently involved was not worth the internal bookkeeping time, other participants felt that, if the red tape were reduced, the amount of money would probably be worth the trouble.

A number of survey participants reported that DOL enforcement officials are not well-informed about business, particularly employment practices (Berkeley Planning Associates, 1982). Employers feel that officials take a punitive approach and reported that complaint investigations and compliance reviews were time consuming, ignoring the burden placed on management to be responsive beyond reasonable investigation requirements. Survey participants felt the focus of enforcement was on detailed management and record keeping rather than results or reasonable evidence of good faith efforts.

Federal contractors' perceptions about DOL enforcement may be drawn from compliance experience in general. The DOL survey found that employers' attitudes toward the monitoring of Affirmative Action efforts for workers with disabilities were similar to enforcement activities for other protected groups (Berkeley Planning Associates, 1982). This survey was the only report found on employers' concerns about the influence of Federal contracts.

Organized Labor

Organized labor is an external influence which has had considerable impact primarily because many of the jobs which disabled people apply for are covered by union contracts. The perception of the effectiveness of labor's role in assisting individuals who are disabled to enter or return to the work force varies across time and person. For example, employers have reported difficulties in integrating applicants with disabilities into the work force because of the inflexibility of unions in accepting the necessity to bypass entry level jobs in order to place the person with a disability in a job which the individual can perform. On the other hand, organized labor has taken initiatives in several areas to facilitate improved working conditions and rehabilitation programs which benefit persons with disabilities. This review is an attempt to draw conclusions based on the meager literature from both perspectives--employers and labor--and also any other insights into the role labor plays in the employment of persons with disabilities.

When surveyed, employers have indicated that organized labor's involvement with workers with disabilities has largely centered around efforts to protect the union membership. For example, in 1979, Atlanta employers reported that unions in their plants were indifferent to workers with disabilities as long as there was no interference with seniority provisions in union contracts (Eggers, 1960). Contemporary employers participating in a national survey defined the union role more explicitly (Ellner & Bender, 1980, p. 41):

> Local situations differ. The level of cooperation we get concerning the handicapped depends upon whether or not it conflicts with union practices and policy. They

have got to protect their own interests first. Otherwise, all things being equal, their concern for the handicapped is certainly equal to that of ours.

The first obligation of the union is to protect its own membership, so questions such as seniority may arise when jobs are at stake. This may lead to conflict when jobs are scarce and priorities or organized groups are to be considered.

Employers have reported that unions hold unfavorable attitudes toward the employment of workers with disabilities. Of eleven unionized firms in the Atlanta survey, only one felt that their union favorably regarded the employment of workers with physical disabilities (Eggers, 1960). Three reported an attitude of indifference while at another the union representative actually was quoted as saying: "Handicapped people cause trouble, and we would rather not have them" (Eggers, 1960, p. 430). A participant reported that while the union wanted employees who became disabled to remain on the payroll, it would not go along, to any great extent, with hiring applicants with physical disabilities. Another respondent found the union's objection so strong that hiring persons who were physically disabled would have had an adverse effect on employee morale.

Surveys revealed that employers take union objections seriously. Over 50% of the respondents in a survey in the Minneapolis-St. Paul area were willing to utilize a work assessment clinic to evaluate the work potential of employees with cardiac conditions (Reeder & Donohue, 1958). While the employers felt such a program would protect both the company and the workers with disabilities, many of the firms were unionized and reported a need to clear such programs through the unions. They reported that their unions held rigid attitudes toward seniority rules and as a result providing a different job for an employee who had a heart attack was a problem.

Employers report that seniority rules have been a problem in their efforts to employ applicants with disabilities. A national survey identified seniority rules as the one aspect of labor agreements most likely to inhibit the accommodation of workers with disabilities (Berkeley Planning Associates, 1982). Employers in the survey pointed out that workers who are disabled run the risk of being 'bumped' by senior workers and unable to find other placements within the firm.

Also, some employers report being reluctant to approach unions about accommodation issues. A case study respondent in the DOL survey offered this explanation: "Management feels that it has a limited number of 'bargaining points' at its disposal and it is reluctant to 'use them up' on issues that affect only a few workers" (Berkeley Planning Associates, 1982, p. 47).

The sketchy picture resulting from limited research is one in which employers are concerned, although not entirely negatively, about labor's acceptance of employees with disabilities. One contemporary survey finds respondents reporting that unions are neither a major obstacle to accommodations nor a major influence in bringing them about (Berkeley Planning Associates, 1982). Some respondents in this survey regarded the union's role in Affirmative Action for workers with disabilities as largely passive--responding to requests made by management and contributing their largest influence by the existence of labor contracts. However, a number of the respondents indicated that unions were generally supportive when approached by management to approve exceptions to the union rules in order to accommodate workers with disabilities. Over 60% of the unionized employers reported that unions did not discourage accommodation and that union support was a major factor in accommodation decisions.

Today, many employers are not involved with unions. The AMA survey (Ellner & Bender, 1980) for example, revealed that only 33 of 98 respondents answered a question about the union-disabled person connection. When DOL survey participants were asked whether or not unions discourage accommodation of workers with disabilities, the most frequent response (42%) was "not applicable" (Berkeley Planning Associates, 1982).

When examining the perspective of unions in regard to the employment of persons with disabilities, a different picture emerges. For many years, organized labor has advocated the employment of workers with disabilities through the efforts of organizations such as the AFL-CIO. This group has participated in national organizations such as the President's Committee on Employment of the Handicapped for many years, and has distributed national policy statements reflective of support for employment of persons with disabilities (AFL-CIO, 1973). The legislative efforts of unions have protected employees from work-related disabilities, supported worker's compensation laws, and improved support for rehabilitation programs. Additionally, unions have moved to integrate Affirmative Action requirements for persons with disabilities into their contract negotiations and many unions have pushed for nondiscrimination clauses in contracts (Ross, 1981).

The AFL-CIO Human Resources Development Institute has organized the Handicapped Placement Program and has received funds for Project With Industry Programs from the Rehabilitation Services Administration and the Department of Labor (Ross, 1981). These programs have placed over 1,900 workers in jobs in several major cities across the country (Ross, 1981). Interestingly, the same recommendations for rehabilitation partnerships with employers apply to unions. The Director of the Projects with Industry program for the AFL-CIO sums this up well (Ross, 1981, p. 12):

> The single most important thing is to develop relationships. Relationships between rehabilitation practitioners and the union constituency in their respective areas. Developing these relationships will require a combination of efforts, such as identifying the unions and their leadership, and developing appropriate training for each constituency. It won't come without some effort. But, in the long run, it will be worth it.

There are several complex issues, in addition to seniority concerns, which must be dealt with in accommodating workers with disabilities in unionized employment settings. One illustration is the procedure for distributing overtime in which the person with the lowest amount of overtime gets the first option for additional overtime (Berkeley Planning Associates, 1982). Without any modification of this procedure, the disabled worker who was unable to perform more than the usual workload, would repeatedly be given the first option for overtime. Although many persons with disabilities are capable of overtime work, those who are not should be identified. Their inability should be recorded as a "refusal of overtime" so the distributiuon procedure can automatically bypass them.

Although there are differing views on the role unions play in facilitating the employment of workers with disabilities, there is no substantial evidence that they impede the employment of persons with disabilities. There are many points in collective bargaining agreements and labor contracts that have to be dealt with realistically. Positive signs indicate that employers and unions are beginning to work together to assist workers with disabilities.

Cooperative efforts among rehabilitation, employers and unions have led to some productive developments. For example, respondents in the DOL survey reported that modifications of job duties were likely to be successful when they were agreed upon by co-workers and did not reduce the paygrade of the employee performing the work (Berkeley Planning Associates, 1982). A specific example reported in this study involved an employee using a wheelchair who was allowed to restrict her work to processing rather than gathering test samples (the job called for both tasks). This accommodation was reportedly successful because the supervisor, co-workers, and the union representative all agreed that it was reasonable. Anticipation of concerns and negotiations with all involved parties seems to be the key to modification of job duties.

The two major issues which have been identified as most related to the employment of persons with disabilities in unionized settings are seniority and job restructuring (Ross, 1981). Both of these issues must be addressed in the collective bargaining procedure. Promising approaches such as labor-

employer committees are beginning to be implemented to deal with the whole problem of reasonable accommodations.

This review of organized labor's involvement in the employment of persons with disabilities has indicated that there are both problems and solutions to obstacles in current practice between employers and unions. The issues of seniority and job accommodations/restructuring are real and important to both groups. However, the national leadership provided by organizations such as the AFL-CIO through the Human Resource Development Institute is beginning to have considerable impact on the positions taken by local union organizations. Both employers and unions are aware that the law requires many employers to establish and implement Affirmative Action programs for persons with disabilities. These requirements must also be reflected in union contracts if employers are to meet legal requirements. Although there is limited research evidence on the impact which unions have had on the employment of workers with disabilities, there is evidence that national organizations are concerned and involved in the movement toward integration of persons with disabilities in society.

In summary, the rehabilitation practitioner should be well aware of the importance of organized labor and its role in the employment setting. Although unions have not always been seen as facilitative, they have worked for many of the programs and services which benefit workers with disabilities. As is the case with employers, union leaders and members need to be aware of and involved in a partnership arrangement with rehabilitation to meet the needs of persons with disabilities. Close working relationships in which union representatives, employers, and rehabilitation practitioners work to resolve all of the obstacles and barriers to employment are essential.

Summary

An evaluation of the effects of external factors on employers in the employment of persons with disabilities involves the examination of Federal legislation, organized labor, and other entities. The first two were reviewed to determine the influence these had on employers faced with decisions about employment programs for workers with disabilities. Federal contractors with contracts of $2,500 or more annually are required to have affirmative action programs for workers who are disabled. This provision covers many large employers throughout the United States and is having an impact as audits of compliance are conducted. The legislation is having a positive effect on employment of workers with disabilities, and on the accommodations for accessibility and job modification required for some of these workers. Tax credits, among other incentives, seem to be favored by employers to facilitate their involvement. Although expressing some reservations about compliance audits and the procedures used, employers are moving to comply with the

legal requirements to recruit qualified workers with disabilities. One of the promising trends is for employers to view technical assistance from VR agencies as important to them in their overall efforts to accommodate workers who are disabled. Pati and Adkins (1980) have provided an excellent review of the options available to employers as well as exemplary practices employers are using across the country to employ workers with disabilities.

Some employers see unions as obstacles to smooth integration of persons with disabilities into the work force. Labor unions see themselves as having been in the forefront of legislative initiatives to provide rehabilitation programs and services for workers with disabilities, including their own membership. Although it is difficult to reach hard and fast conclusions based on the data, it appears that both employers and unions are more willing to facilitate the retention of workers who become disabled after employment than the employment of new workers with disabilities. It is difficult to determine if unions are an obstacle. However, employers view unions as a powerful outside influence on recruitment and retention of workers. Since employers and unions are the key factors in the employment environment, it appears that VR and other rehabilitation organizations should make a concerted effort to facilitate working relationships with them which would benefit workers with disabilities. Outreach efforts to organized labor and employers, such as those described in the summary for the preceding chapter, are needed to make both groups aware of the availability of workers with disabilities, and how each group can assist in using this largely untapped source.

Career Initiation

Employers contemplating the hiring of persons with disabilities are involved in a complex decision-making process influenced by all the usual factors involved in employing new workers: productivity in the entry position, advancement, dependability, ability to relate effectively with supervisors and co-workers, and employee satisfaction with the job. The employer is seeking to maximize the return on investment through the recruitment and employment of effective employees, be they able-bodied or disabled in some way.

The hiring decision involves what Schroedel and Jacobsen (1978) refer to as productivity evaluation. From an economic perspective, the employer is seeking primarily to maximize return on investment, i.e., to make the most profit possible within reasonable bounds. However, the employer is also seeking to hire workers who are not disruptive and who 'fit into' the organization. When the prospective employee is disabled, the employer must take into account an added dimension--the implications the disability has on assessment of potential.

The literature reveals that employers have negative attitudes toward persons with disabilities that are similar to those attitudes held by the general population. They prefer individuals who have bodily impairments (e.g., amputees) over those with mental or sensory disorders (e.g., blind or mentally retarded) because those with bodily limitations are perceived as more consistent and predictable (English, 1971; Hartlage & Taraba, 1971; Fuqua et al, 1984), and yet, there are differential concerns. Like the general public, employers do discriminate in their attitudes toward different disability groups (Fuqua et al, 1984). Although this is a factor to be considered when examining the hiring process, the implications of negative employer attitudes are not clear cut. While negative attitudes may not prevent an employer from hiring workers with disabilities, positive attitudes will not necessarily predispose an employer to hire them. In addition, such factors as company policies may override the attitudes of individuals who are actually responsible for hiring.

In examining hiring concerns, the authors were forced to determine which factors were specific to the actual hiring process. Therefore, general studies of attitudes and overall employment practices were not very helpful. It was determined, on an a priori basis, to concentrate on those employment process factors with which an employer might be involved should a person who is disabled apply for a position. The literature was searched to determine information in the following areas: (1) the application format and process, (2) the interview process, (3) requirements for physical examinations including tests of mental functioning, (4) requirements for special tests, and (5) the entry level job identification process.

Application Format and Process

Although limited research dealt directly with the application process, some evidence relevant to the topic was located. Studies reporting on the hiring process and related procedures, disclosure of disability, application forms and the ability to complete them, as well as the consequences of accompanying the applicant during the process are reviewed in the following material.

In an early survey, Noland and Bakke (1949) reported on employers' hiring practices in two cities: New Haven, Connecticut (NH) and Charlotte, North Carolina (C). This study acts as an historical anchor point for comparison with more recent investigations. Lengthy personal interviews were conducted with 240 employers responsible for setting policy and directing hiring practices, representing a cross section of businesses. Respondents were asked to indicate factors of outstanding importance across multiple criteria: character, sex, personality traits, physique, particular experience, general experience, education, color, top age, best age, citizenship, nationality, family status, residence, politics, religious affiliation, church attendance, and military service. They were also asked to indicate preferences across five worker groups: common labor, production, service and maintenance, routine clerical, and administrative and executive. Findings, reported in terms of the percentage of companies citing the characteristics, revealed the following (Noland & Bakke, 1949, p. 176):

	NH	C
Character	70%	77%
Sex	65	60
Personality traits	60	51
Particular work experience	47	53
Education	44	52
Physical qualifications	51	68
Color	29	47
Top age	26	35

The other factors were below 30%. In essence, respondents from both cities were reporting a preference for male employees with high character, stable personality traits, particular work experience related to the job, more education, and good physical condition. In Charlotte, there was a preference for young white workers.

As expected, there were different preferences across worker groups. For example, physical qualifications varied considerably (common laborer NH = 80%; administrative and executive NH = 31%) (Noland & Bakke, 1949, p. 180). Predictably, education and character were reported to be more important for administrative and executive positions than physical qualifications while character, personality, education, physical qualifications and

work experience, in particular, were felt to be important to all types of positions.

Hamilton and Roessner (1972) studied employers of Work Incentive Program (WIN) graduates. Two hundred eighty employers nationwide defined the following requirements for jobs available to these graduates (Hamilton & Roessner, 1972, p. 16): ability to read (85%), ability to write (85%), good personal appearance (75%) and job references (50%). Interestingly, most of the employers did not require a high school diploma (28%), general work experience (26%), or specific job training (28%). Participants did indicate outright rejection or reservations about applicants with records of alcoholism (56%), drug use (73%), other health problems (65%), arrests (52%), and prison terms (53%). A number of employers would not disqualify an applicant because of these problems, however, because they reported "it depends on the circumstances".

These two studies revealed a similarity of concern for factors commonly listed on the application blank. The term "character" used in the Noland and Bakke study reflects the more specific definitions, e.g., substance abuse, arrest, prison record, used by Hamilton and Roessner. Educational qualifications were of importance to employers in both studies, although the level of education in the Noland and Bakke study was not specified. Although level of education is obviously affected by level of the jobs available, results of the Hamilton and Roessner study indicate there are many jobs in the workplace where the requirement is basic literacy rather than completion of formal levels of education. Sex, age, and race could not be compared because they were not included in the Hamilton and Roessner study.

In addition, there was no way to directly compare personality traits judged during the interview process with those evaluated from application form data. While factors such as education and/or literacy, character (e.g., references), and physical qualifications, remain of concern after an application is completed, the emphasis on work experience was less a factor for Hamilton and Roessner participants. It should be kept in mind that these studies are not directly comparable since different methodologies, samples, and other characteristics are involved. However, for the types of positions which many VR clients qualify for, the more recent study provides valuable information about factors which are likely to receive attention when an employer reviews the application form.

Employers place a great deal of emphasis on the effectiveness with which the job candidate completes the essential information called for on the application form. For example, Smith (1981) interviewed employers about concerns they have when employing mentally retarded persons. The ability to complete the application form effectively was identified as an important factor.

It is also important that the applicant who is disabled demonstrate independence by completing the entire employment application process, including the interview, without assistance. The ability of the person to initiate the process in the same manner as other applicants has been emphasized particularly by participants in Wacker's (1976) informal survey. Participants from large organizations preferred that applicants who are blind approach them independently for jobs offered on the open market without the support of rehabilitation personnel. Although based on a limited number of contacts, Wacker does identify the negative consequences incurred when rehabilitation placement practitioners accompany applicants with disabilities during the application process. Such intervention may communicate that the person is incapable of finding his/her own job and cause employers to infer that the applicant is not capable of independent worker productivity. This preference for independent application was identified earlier by Olshansky, et al. (1958) in their study of employment practices regarding ex-mental patients. They found that more than 70% of their respondents preferred the job candidate to conduct the application process independently.

The application process also involves the determination of the actual hiring agent. In the study by Hamilton and Roessner (1972), the following significant information was revealed about the hiring practices of respondent organizations: one third hired through their front offices; one-half hired through joint involvement of the front office and the supervisor; about one tenth hired through the supervisor; and about one tenth reported some other arrangement. This study underscores the important role personnel offices and supervisors have in the hiring process, and emphasizes the need to create a good initial impression. Most of the time the front office screens job candidates using application data and initial impressions of the individual.

The final, and possibly most significant issue concerns how a disability is reported on the application form. If the employer has negative attitudes about the disability, an applicant may be rejected if he/she identifies the condition (Ayer, 1970; Colbert, Kalish & Chang, 1973; Eggers, 1960; Florian, 1978; Greer, 1957, Harkness, 1971, Hart, 1962; Olshansky, et al. 1958). Therefore, the stigma and negative attitudes which an employer attaches to a disability may prevent the job candidate from moving to the next level of consideration--the interview. No studies were identified which systematically examined the effects of reporting versus not reporting disabling conditions. However, in their study on employment of persons with epilepsy, Sands and Zalkind (1972) reported that the majority of respondents from Pennsylvania would not consider applicants with epilepsy even if positive information about the condition and circumstances of the disability was provided. This implies that the mention of epilepsy is a red flag that makes it difficult to overcome the employer's initial negative reaction.

Holmes and McWilliams (1981) surveyed employers about the employment of persons with epilepsy. One of the questions asked of the 116 respondents from Tennessee concerned the reporting of epilepsy on the application form. Respondents reported as follows: 33% indicated that reporting would be a major factor in considering the applicant; 38% reported that it would not; and 29% were unsure. Combined responses indicate that a total of 62% would have some concern about job candidates reporting epilepsy on the application form.

Emener and McHargue (1978) surveyed 57 employers from large and small businesses in Florida. Participants were interested in obtaining the following disability-related information from applicants: disability description, physical limitations resulting from the disability, and ability to perform the job.

Olshansky, et al. (1958), found that employers were unsure about the type of information they would need to evaluate applicants who were ex-mental patients. It was not clear why 61 of the 100 participants asked for diagnoses when only five said they would use them to determine work readiness (Olshansky, et al. 1958, p. 396). However, 84% of the 35 who requested a doctor's recommendation and 65% of the 51 who asked to view hospital records, indicated that they intended to rely on this information. Survey authors felt it was not clear exactly what type of information respondents were looking for or could constructively evaluate from such sources. They concluded that the employers had not thought through the process of evaluating applicants with a history of mental illness because most of them had little, if any, direct experience with such individuals as job candidates. In addition, findings revealed that circumstances surrounding the onset of the mental illness could affect the employer's decision with war trauma, overwork, or grief, more likely to be understood and excused (Olshansky et al, 1958). This suggests that when applicants report a history of mental illness and treatment, additional explanations may positively influence the employer, particularly if circumstances surrounding onset of the illness are understandable and excusable.

In summary, employers assign differential weights to factors routinely collected during the employment application process. Although these factors change somewhat over time, employers continue to have a high interest in factors such as basic skills and literacy. Applicants are expected to be able to independently complete the application process, and this is used as a proxy of future work potential. Both the general evidence regarding employer attitudes and the specific studies cited indicate that the reporting of disability on an application form will likely cause the employer to have reservations, if not doubts, about the job candidate, even though outright rejection may not take place. Many employers report differing concerns based on the type and severity of disability and do not categorically reject any and all applicants with disabilities. However, the reporting of

disability should be accompanied with additional evidence regarding abilities to offset the negative connotations which disabilities may have for employers.

Interview Process

After the applicant has passed through the front gate as represented by the screening of applications, the next hurdle is the employment interview. Interviews run the gamut from structured, formal procedures to brief, informal, hurried encounters designed to make quick decisions. In examining the literature on the interview process, the following aspects were identified: the hirer's role in observing physical qualifications and limitations; the physical attractiveness of the applicant; social performance during the interview; appearance; independence displayed during the interview; interview costs associated with applicants with disabilities; the presentation of disability information; and the need for extra-interview information.

In the study cited earlier by Noland and Bakke (1949) the types of verification used to check on physical qualifications required for five levels of work were examined. Employer observations and statements made by the applicant were used far more frequently than checks with references, examination of medical records supplied by the applicant, or physical examinations furnished by the company. Therefore, in verifying the presence or extensiveness of a physical disability or the applicant's physical condition, more reliance was placed on what transpired during the interview than through any other assessment. While employer impressions and statements by the applicant were both used to check on occupational aptitudes and performance, only the employer's impression was used to evaluate the intelligence level of the job candidate.

When Greenwald (1978) studied the relative effects of physical attractiveness, experience, and social performance upon interviewer decision-making for women applicants, he found that physical attractiveness had a negligible effect while verbal and social performance were important factors. Although the degree of physical variation is not known, this finding has relevance for disabling conditions which may affect physical attractiveness.

Mayo (1976) conducted a study which assessed the effect of eye contact by applicants with blindness during the employment interview. Businessmen were exposed to films of blind women engaged in four separate employment interviews during which the amount of eye contact varied from maximal to minimal. Maximal contact resulted in favorable hiring decisions and character trait ratings. Interestingly, when participants were asked the reason for their positive responses, 70% did not mention eye contact.

A somewhat different approach was used to determine the effects of reporting previous treatment for mental illness in a

study by Farina and Felner (1973). They experimentally manipulated a history of mental illness during interviews with employers. In half the interviews a confederate posing as an applicant presented a history of treatment for mental illness while in the other interviews the confederate indicated that the time had been spent traveling. Employers were less friendly toward the confederates posing as ex-mental patients and offered twice as many jobs to those posing as travelers. The history of mental illness, however, did not completely preclude job offers.

In a similar vein, Brand and Claiborn (1976) conducted interviews in which six students presented themselves as ex-convicts, ex-mental patients and ex-tuberculosis patients. Training was provided so that the only variable which differed across each interview situation was the type of past experience with illness or incarceration. Results showed no significant difference across the three conditions in the number of job offers, with two out of three applicants receiving offers of employment. Less than half of the employers inquired further about the applicant's history after the interview. All of the students passing as applicants were bright, articulate, and probably gave good impressions during the interviews, possibly offsetting any stigma attached to their condition.

Ayer (1970) studied the reaction of school administrators to the employment of teachers with various disabling conditions. Mixed results were obtained, causing Ayer to conclude that placement efforts need to be highly individualized. She recommended that additional methods of demonstrating competence be used to offset possible bias on the part of the employer. For instance, the interview could be supplemented with videotaped presentations demonstrating the individual's competency in teaching skills. These findings imply that interviews alone may not be sufficient for teachers with disabilities to demonstrate their competence. They may have to offer additional evidence beyond that which can be observed during the interview or submitted on the formal application.

Williams (1972) conducted a study of the extra costs and extra benefits assigned to different employment factors. For 80% of the participants, interviews did not involve either extra costs or extra benefits for half of the disabling conditions presented.

Emener and McHargue (1978) found that 100% of their respondents wished to personally interview all applicants with disabilities. Olshansky, et al. (1958) found that employers used the interview as a screening mechanism to determine if the person could act independently. Participants responded negatively when anyone accompanied the applicant to the interview. This underscored the importance of the interview as an opportunity to display abilities important to independent worker functioning. This information should serve to caution rehabilitation pro-

fessionals about accompanying the job candidate to the application site. Paving the way for the person with some form of pre-interview contact may be more appropriate and effective. Possible exceptions are understandable, for instance, when a person is hearing-impaired, and requires assistance with communication. In such situations, the applicant should be ready to explain how communication would be handled if the individual is hired.

Wacker (1976) also addressed the interview process in his recommendations regarding the employment of persons with blindness. "Only by coming in person, independently representing himself, can the blind job seeker compete equally with his sighted counterparts in presenting his qualifications for a specific job." (Wacker, 1976, p. 30). He contends that a protective attitude by rehabilitation professionals reinforces the negative attitudes employers have about the independent functioning of workers who blind.

When Smith (1981) interviewed 100 potential employers of mentally retarded individuals, participants emphasized the importance of the ability to conduct oneself well in the interview.

In their study of organizations employing WIN graduates, Hamilton and Roessner (1972) found that good personal appearance was required by 75% of the national sample of 280 employers. This was emphasized more than such job-related requirements as previous experience, training, or references. Although it can be argued that individuals have the right to maintain themselves according to personal preference, many employers expect "middle class standards" in personal appearance. Even though most of the jobs were for non-professional and non-managerial positions, where more informal dress is usually acceptable, the overall impression of neatness and 'good' personal appearance was important to respondents.

In summary, the significance of the job interview process cannot be overstated. A great deal of importance is attached to observations made by the interviewer concerning appearance, social performance, physical capacities, intelligence, and independence. The literature supports the conclusion that the interviewer's observations of the applicant are critical, if not the most critical, factor in the hiring process. Verbal skills, social skills, and eye contact are important aspects of interview behavior, and may override physical appearance factors. Presentation of a history of disability, particularly a history of mental illness, may cause the employer to have doubts about the applicant. However, the manner in which information is shared and the social skills of the presenter may offset the negative consequences of the disability, especially in the situation where the disability is not a severe physical condition. Not only do employers prefer to interview applicants prior to any decision-making, they prefer to interview the appli-

cants alone and use independent behavior as an indicator of future work potential. Also, applicants need to be prepared to offer additional evidence of job skills to overcome reservations which employers may have about employability.

Physical Examinations

One of the ways in which applicants with disabilities may be subjected to additional evaluation during the hiring process is through pre-employment physical examinations. Such examinations are supposedly done to determine if the person is physically fit to perform the duties necessary for employment. If such examinations are truly linked to actual jobs, then the physical examination may determine if the person has the requisite physical qualifications for the job. However, if the physical examination is used as an exclusionary vehicle, identifying physical limitations unrelated to actual job performance, then the practice becomes discriminatory. For this reason, research evidence on the use of physical examinations in the hiring of individuals who are disabled is significant.

In reviewing this section, it should be noted that the research studies on the topic are dated. In fact, the surveys reported here predate the passage and implementation of the Rehabilitation Act of 1973. This historic legislation has led to the development of a more receptive climate for employment of persons with disabilities and a lessened emphasis on physical capabilities. Regardless of the cause, the reader should take into consideration the age of the studies reported here.

Eggers (1960) conducted a study of 15 Atlanta employers representing a cross section of industries that varied in size. Eight of the 15 participants felt that entry physical examination standards were too high and rigid to permit the acceptance of job candidates with disabilities. Rejection was of a general exclusionary nature and not tied to the demands of specific jobs within the organization. However, even with these standards, there were 1,287 employees with disabilities (about 7.5% of the total work force) working for these organizations. Many of these individuals had become disabled after employment, indicating a willingnesss to retain employees after the onset of disability, but an unwillingness to hire new workers with disabilities.

Polner (1958) surveyed 18 heavy industrial firms in the Chicago area who employed a total of almost 200,000 workers. Each of the firms utilized a pre-employment physical examination as well as particularly rigid standards for job candidates with evidence of cardiac disability. Most such applicants were rejected for the following reasons: cost of health, welfare and pension plans, worker's compensation costs, and potential hazards to fellow employees. The primary basis for concern was fear of future compensation claims and costs. However, those firms with employees who developed cardiac conditions during employment were cooperative and utilized selective placement whenever possible.

Reeder and Donohue (1958) conducted a survey of Minneapolis/St. Paul employers, investigating the prevalence of pre-placement physical examinations and the employment of individuals with cardiac conditions. Although larger firms tended to use the pre-placement physical more than smaller organizations, there was no difference across type in regard to exam requirements. Most firms had dropped their physical exam requirement because the cost was not warranted. Only 12 of the 100 respondents continued to use pre-employment exams. This did not mean that the respondents were no longer concerned about disability. Most of them used the cost-effective method of including a medical history on the application form, along with an inquiry about each applicant's willingness to take a physical exam.

Lee, Rush, White, and Williams (1957) canvassed medical directors from a variety of industrial concerns, from life insurance to copper smelting, about their policies and practices toward the employment of individuals with cardiac conditions. All 19 required pre-employment physical examinations, with most including chest x-rays and electrocardiograms for those over 40, or those with a possibility of cardiac problems. Seven participants had a definite policy against hiring applicants with cardiac conditions. Eight reported that during the past year they had hired 242 persons with cardiac disabilities out of 19,321 new employees. Their primary concerns were compensation liability (18 of 19), sickness benefit liability (17 of 19), and pension liability (16 of 19). The authors concluded that many employers are reluctant to hire persons with cardiac disorders even though actual policies against their employment are not always in place. The actual number of compensation settlements for cardiac cases was small, causing the authors to conclude that liability was more of a perceived threat than an actual experience.

Noland and Bakke (1949) found that physical examination reports furnished by the applicant were almost never accepted. The practice of requiring pre-employment physicals was more common in New Haven than in Charlotte, with large industries tending to require a physical more often. Percentages of employers requiring exams across the five worker groups were as follows: common labor 35%; production workers, 28%; service and maintenance, 43%; routine clerical, 22%; and administrative and executive, 25%. When the large industries were separated, their percentages were over 50% in each category.

When Reeder (1965) canvassed 144 employers representing a cross section of the types and sizes of businesses in the Los Angeles area, he found that only 15% of the firms required pre-placement physical examinations of all prospective employees, while 12% required them for some applicants. Large firms requiring physical examinations were no different in their willingness to hire persons with cardiac conditions than counterparts who did not require pre-placement physicals. However,

among small firms, those requiring the physicals were much less willing to hire a person with a cardiac condition. Over half of the firms requiring physicals informed the medical examiner of the position under consideration, thus indicating a willingness to relate the physical condition of the applicant to the demands of the job. Reeder (1965) concluded that exclusionary policies tied to physical examinations were more likely in small organizations.

The Federation Employment and Guidance Service (FEGS, 1959) canvassed New York City firms representing seven diverse industries of varying size, where the jobs were relatively sedentary and of a light physical nature. No relationship was found between the requirement for a pre-employment physical examination and the hiring of applicants with disabilities. However, the large firms required examinations for the majority of job candidates applying for non-supervisory positions. In many of these firms, examinations were performed by in-house medical departments where standards for the examinations were set by the physicians. However, managers retained the final decision-making power for hiring.

Olshansky, Friedland, Clark, and Sprague (1955) studied employers in the greater Boston area revealing that pre-employment examinations, common in larger organizations, were used by over half of the 100 employers in their sample. Usually, the examinations were for general exclusionary purposes and not for selective placement. However, as has been noted in other studies, employers were more accepting of workers who developed cardiac conditions during employment, providing them with assistance and selective placement after acute conditions subsided.

In summary, surveys have primarily dealt with applicants who had cardiac conditions. The majority report that pre-employment physicals were often used for general exclusionary purposes (Eggers, 1960; Lee, et al., 1957; Olshansky, et al., 1955; & Polner, 1958). Only one survey found that employers related examination results to the requirements of the position (Reeder & Donohue, 1958). When the reasons for exclusion were examined, employers indicated concern about welfare and compensation costs (Lee, et al, 1957; & Polner, 1958). Additionally, larger firms were most likely to utilize pre-employment physical examinations (FEGS, 1959; Noland & Bakke, 1949; Olshansky, et al, 1955; Polner, 1958; Reeder, 1965; & Reeder & Donohue, 1958). While some employers knowingly hired applicants with cardiac conditions, they were only a small percentage of the total number of new employees. Also, there was some evidence to indicate that the findings of a pre-employment physical examination may not affect the final hiring decision (FEGS, 1959). While these findings show that pre-employment physical examinations were frequently used to exclude applicants with disabilities, the surveys are old and may not be indicative of contemporary practice.

From the employer's perspective, it may be good policy to require physical examinations. If a firm is to take advantage of second injury law provisions, they must know about the initial disability at the time of employment. The pre-employment exam can detect hidden disabilities such as heart conditions.

However, physical examinations are usually illegal when they are used for exclusionary practices. Ideally, the pre-employment examination should reveal limitations which would keep the applicant from performing the duties of the specific job under consideration. If the examination does not indicate limitations which would prevent the person from performing the job, then the results cannot be used to reject the applicant.

Job Identification Process

One additional factor of consideration during the hiring process is the identification of appropriate jobs for specific applicants. Usually, employers have openings for which they seek applicants. However, it is also possible to develop positions for promising applicants. For applicants with disabilities, the process of job identification may be initiated by a third party who contacts the employer about an applicant. The employer then reviews various positions within the organization to determine where the person might best be placed. Job development personnel may conduct surveys of employment settings and analyze jobs to determine which would be most appropriate for their clients.

The job identification process for job candidates who are disabled has often been difficult for employers. The spread effect of the disability tends to override the functional abilities of the job candidate, particularly when they are not familiar with adaptations and assistive devices which enable persons with disabilities to work. As a result, disabled persons are not considered capable of many job functions. The following section examines the literature on the job identification process for various disability groups.

Emotional Handicap: Thirty percent of the respondents in the Olshansky et al. (1958) survey indicated they would place ex-mental patients in any job for which they were qualified, while more than 40% would limit the jobs primarily to unskilled positions and situations involving little public contact, where pressure and responsibility would be avoided. For 40% of the respondents, these low-level assignments resulted from fear of the unpredictable and potentially bizarre behavior often associated with mental illness. The authors point out, however, that ex-mental patients tend to apply for such low level jobs because of their low self-evaluation.

The placement of ex-mental patients in lower level jobs was also noted by Salzberg, et al (1961). Although 78 small Los Angeles employers in manufacturing, retail and service

industries reported a willingness to hire ex-mental patients, very little actual hiring took place. The authors emphasized the need for retraining and special employment to avoid placement in low-level jobs.

Mental Handicap: During a survey of West Virginia employers in service industries, Phelps (1965) found that the type of business influenced job identification possibilities. Forty-five percent of the personnel managers in hotel, nursing home, and laundry establishments believed there were no jobs in their organizations which persons who are mentally retarded could perform. However, in six types of service establishments (hotels, nursing homes, laundries, restaurants, hospitals, and motels), the majority of personnel managers were favorable to employment of persons who are mentally retarded, with hospital and motel industries most favorably oriented.

Smith (1981) surveyed 44 employers in a small town and metropolitan area in a southern state. Sixty-eight percent of the respondents indicated that they had jobs they considered suitable for persons who are mentally retarded (e.g., maintenance, kitchen aide, laundry worker, shoe repair, production work). While such jobs may be somewhat stereotypical for this population, these are the types of positions identified by participants who have not received job development services from rehabilitation practitioners.

Bolanovich and Rasmussen (1968) surveyed 231 St. Louis employers and members of the American Society for Training and Development. In general the respondents felt that workers who are mentally retarded are satisfied with monotonous jobs, i.e., general laborers, unskilled and semi-skilled work, personal service work and porters. Slightly over one-half reported that their organizations had some jobs which could be filled by persons who are mentally retarded. Respondents with a positive attitude toward workers who are mentally retarded identified more jobs as appropriate for them. When placement specialists or persons with disabilities can detect such positive attitudes upon initial contact, they may wish to increase their job-seeking efforts with these employers.

Cardiac Disabilities: Reeder and Donohue (1958) found that 57 of 89 respondents gave a yes or a qualified yes in response to queries about the employment of persons with cardiac conditions. Usually the responses were qualified, contingent upon proof that the applicant could perform the job without placing undue strain on the cardiac condition. The study revealed that employers were willing, as long ago as 1958, to view this group of applicants in terms of their abilities. This was particularly true if the person with the condition had a scarce talent which the employer needed at the time of application.

When Olshansky, et al (1955) surveyed employers in the greater Boston area, 24 of 100 listed the 'existence of suitable

jobs' as the most important factor determining company hiring policy. While this factor was second in importance only to worker's compensation liability, it should be pointed out that it was not cited as most important by 76 of the 100 employers. Evidently, the great majority could identify appropriate jobs, since employees who developed cardiac conditions during employment were usually retained. However, the survey did confirm reluctance to assume the risk associated with a new employee with a cardiac condition.

Epilepsy: Hicks and Hicks (1968) noted a positive change in the receptivity of San Francisco employers during the ten year period between their two surveys. The latter survey revealed a greater number and a wider range of jobs for persons with epilepsy, including professional and highly skilled positions. The authors attributed the change to educational efforts directed at promoting a realistic perception of the abilities of persons with epilepsy.

Gade and Toutges' (1983) survey of employers in a small city in North Dakota revealed that two out of three of the respondents had jobs in their organizations which could be filled by persons with epilepsy. Although the survey did not identify the specific types of jobs, it did indicate the respondents' willingness to consider such persons for employment--a willingness backed up with action, for 45% of the respondents reported they had knowingly hired persons with epilepsy.

In reviewing the studies regarding job identification, it should be noted that they span the period from 1955 to 1983, and cover four different types of disabling conditions. There is an indication of a modest trend toward improved receptivity and willingness to hire varying groups of persons with disabilities. The most optimistic note was reported in the two studies on epilepsy, with the latter mentioning action associated with interest (Gade & Toutges, 1983; Hicks & Hicks, 1968). The remainder of the studies reported neither an overwhelmingly favorable response nor a great number of potential openings. Employers seemed to hedge when asked to identify specific jobs, and tended to focus on unskilled, lower level positions. This may have been due to an expectation of low performance on the part of persons who are mentally retarded, erratic performance on the part of persons who mentally ill, and unpredictability of seizures on the part of persons with epilepsy. Also, there is continuing concern about the possible re-occurrence of heart conditions. Although many of these studies were performed some years ago, the implications seem to continue to be relevant; and rehabilitation practitioners will need to continue to educate employers about the capabilities of workers with disabilities and participate in the identification of suitable jobs for their clients.

Special Tests

Very little information is available on the use of special tests or waivers from requirements for examinations normally used during the hiring process. Apparently, tests are not commonly used for the types of jobs which many VR clients have traditionally held. Only 35% of the employers hiring WIN graduates required applicants to pass a test of any type as a part of the hiring procedure (Hamilton & Roessner, 1972). Noland and Bakke (1949) reported that less than 1% of the industries surveyed in New Haven and Charlotte used any type of special test as an intelligence check, while five percent or less used them for occupational aptitude and performance checks. Special tests were almost never used to check on character, temperament, or personality characteristics of the applicants.

For persons who are severely disabled, problems exist in the administration of standardized tests because the requirements do not permit variations in testing procedures. Goodyear and Stude (1975) reported that applicants with severe disabilities at the Fresno Internal Revenue Service office were not required to take the Civil Service Commission test. This waiver was justified, for individuals who were employed later measured up on job performance factors when supervisors compared them to non-disabled co-workers.

One resource for the reader interested in this area is the monograph edited by Sherman and Robinson (1982) on ability testing for persons with disabilities, which includes a chapter on employment tests. The authors of this chapter concluded that there was "sparse information about employment testing in the private sector, even for the general population." (Sherman & Robinson, 1982, p. 52). Current procedures in Federal, state and private sector testing practices are covered. The authors note that in recent years the emphasis in Federal and state employment has moved from formal testing to alternate procedures such as special examinations, trial work periods, and ratings based on experience, education and interviews. In the private sector, test use is frequently influenced by the size of the organization. Citing a 1975 study by Prentice-Hall, the authors report that firms with more than 1,000 workers rely on tests more than smaller organizations. Tests are more commonly used in non-manufacturing businesses to evaluate potential for office positions. However, the authors indicate that knowledge of the uses and mis-uses of testing in regard to job applicants with disabilities is very limited.

Legislative Requirements

This review investigated concerns participants had about equal opportunity, affirmative action, and other legislative requirements. Of the many legal requirements affecting the employment process, equal opportunity provisions appeared to be the most significant issue for many respondents.

Regulations governing the employment of persons with disabilities have been in effect for a number of years. Early regulations gave preferential treatment to veterans with disabilities applying for positions with the Federal Civil Service, sometimes creating resentment on the part of non-disabled workers (Simon, 1963). The employment regulations of most concern, however, are those associated with the Rehabilitation Act of 1973, as amended, particularly Section 503 of the Act which mandates affirmative action programs for persons with disabilities for companies with annual Federal contracts greater than $2,500 (estimated to exceed 250,000 employers with more than 31 million employees, Part 1, 1981. Because the regulations to implement the 1973 legislation were not officially issued until 1977, implementation created problems and confusion. An example of this was revealed when the Industrial Social Welfare Center at Columbia University conducted a conference in collaboration with the New York City Chamber of Commerce and Industry (Akabas, 1976). A post-conference survey of the 200 participants indicated that most were only beginning to develop and implement their affirmative action plans for persons with disabilities--only 18% of the 97 firms had plans in place (Akabas, 1976, p. 22). The survey revealed a lack of knowledge on the part of employers and a need for education on a wide range of topics including disabling conditions, the rehabilitation process, assistive devices, architectural barrier removal, job restructuring, and sources of assistance.

Pati and Adkins (1980) provided another example of implementation problems in their review of a Department of Labor survey of 300 companies. Ninety-one percent of the firms were not in compliance--only 24% had affirmative action plans for persons with disabilities and 69% failed to meet job listing requirements with state employment services. The authors found that employers frequently needed assistance in the following areas: (1) locating and screening qualified persons with disabilities; (2) training both supervisors and workers; (3) inviting employees with disabilities to identify themselves; (4) dealing with employees with alcoholism; and (5) winning top management's commitment. The authors indicated that compliance reviews were being strengthened and systematized to correct these situations and follow through on the intent of the legislation.

The DOL study provided extensive information on accommodations for workers with disabilities made by ten major organizations (Berkeley Planning Associates, 1982). Some of the respondents reported that regulations had influenced their employment and accommodation decisions. The authors concluded that, although enforcement had not been stringent and regulations were vague, "the legislation and the regulations have created a 'moral imperative' of sorts to give more attention to the needs of disabled workers and applicants which firms' managers, wishing to be good citizens, have honored." (Berkeley Planning Associates, 1982, p. 86). Major barriers identified in the study included: (1) continuing attitudinal barriers resulting from

myths and lack of experience; and (2) unclear regulations leaving employers confused about the requirements for reasonable accommodation, records and documentation, and the definition of handicap. The authors found that many participants were wary of DOL data gathering because they feared the Department was moving towards the establishment of quotas, burdensome reporting requirements, and affirmative action approaches used with other disadvantaged groups. This fear made Federal interest in accommodation a matter of great concern to industry (Berkeley Planning Associates, 1982, p. 88). Finally, the report identified the following areas where technical assistance might help employers meet their obligations (Berkeley Planning Associates, 1982, p. 89):

* Looking for and recognizing accommodation needs;

* Job analysis and restructuring;

* Accommodation design and rehabilitation engineering resources;

* Dispelling myths about disability;

* Methods for testing and evaluating qualifications of individuals with various disabling conditions;

* Handling issues of disability and accommodation needs during the interview and hiring process (pre-employment inquiries);

* Developing special safety procedures for handicapped workers;

* Examples of specific accommodations that have proved successful for other firms; and

* Understanding the requirements of the regulations

Pati and Adkins (1980) reported evidence that employers coming under the provision of the regulations should be concerned about compliance, and implement their affirmative action programs if they have failed to do so. In 1977 six major Federal contractors had been cited for violations, with settlements of close to three-quarters of a million dollars. Some 5,000 cases involving compliance with the regulations had been investigated by October, 1978, and in 1979 additional contractors were subjected to compliance reviews.

Examples of exemplary compliance, however, are beginning to emerge. Pati and Adkins (1981), cited the following programs: the Pennsylvania Power and Light Company, National Restaurant Association/Food Service Industry, Continental Bank of Chicago, Minnesota Mining and Manufacturing, Control Data Corporation,

Human Resources Development Institute of the AFL-CIO, Amalgamated Clothing and Textile Workers Union, McDonnell Douglas Corporation, Sears Roebuck and Company, and the Tennessee Valley Authority.

The implications for VR practitioners are obvious--employers are "under the gun" to implement affirmative action programs in order to comply with the law. Rehabilitation counselors and placement specialists are in a unique position to provide employers with technical assistance and the delivery of qualified applicants with disabilities. Such assistance efforts, if marketed properly, can help resolve employer concerns about legal obligations. VR agencies should make every effort to deliver such technical assistance, particularly since employers are somewhat suspect of DOL compliance activities, and do not look as favorably on this agency as a source of needed technical assistance as they may on VR agencies who have no role in compliance reviews (Berkeley Planning Associates, 1982).

On-The-Job Training

The development of cooperative, on-the-job (OJT) training programs has served as an avenue to employment for many individuals with disabilities, particularly the difficult-to-place person who is severely disabled, and the newly trained individual who is not fully ready to compete in the job market. Such individuals may need an interim step as a way to competitive employment.

When surveyed, many employers suggest the increased use of job tryouts, i.e., temporary placements to evaluate all aspects of the employment experience (Berkeley Planning Associates, 1982).

Such a program is described by Margolin's (1961) survey of employers who had hired ex-mental patients from a Veterans Administration Hospital. Patients completing the program were discharged and employed temporarily at the hospital, performing regular job roles with pay. The program emphasized work conditioning and employer development. The work conditioning process coupled with extensive follow-up after placement resulted in considerable success. Participating employers reported performance on the part of the ex-patients comparable to other workers.

Another OJT program for workers with mental retardation was described in a survey by Cohen (1963). The OJT participants were students who were assigned to OJT positions in the community while continuing to live in the facility. Out of 177 responding employers, only three indicated dissatisfaction with the OJT trainees.

Surveys of employers have revealed certain factors that may have a direct influence on their receptivity to developing OJT

sites. One of these factors is the size of the organization. In a survey of Massachusetts firms, Hart (1962) found cooperative assistance in training the new worker with a disability to become productive, to be an inducement to the small employer who cannot afford to train new employees with disabilities. In addition, it was easier to arrange OJT experiences with small employers in this survey.

Since small organizations often lack training facilities, government sponsored and supported job training programs can perform a service and possibly affect the receptivity of employers who hire their trainees. Hamilton and Roessner (1972) found that managers in small organizations across the country assessed their workers who were graduates of the WIN program more favorably than managers in large companies, despite similarities in worker background and characteristics.

Another factor which may influence an organization's receptivity toward developing an OJT site for individuals with disabilities is type of industry. During a survey of Baltimore employers Stewart (1977) found that firms with clerical, food service, custodial, service station, and upholstery jobs not only had favorable employment climates and viable training areas for workers with disabilities, but expressed an interest in cooperating with Goodwill Industries to establish OJT sites.

The type and size of the industry can jointly determine a firm's willingness to develop OJT sites. A survey of Boston employers by Olshansky, et al. (1958) revealed that 17 of 50 small manufacturing employers would employ ex-mental patients on a trial basis, while only 6 of 50 large manufacturing, and 7 of 100 non-manufacturing organizations would. For small employers, the job tryout was the preferred way of assessing work readiness. It was also the only way for individuals with certain disabilities--such as ex-mental patients--to demonstrate that they could function effectively on the job. The survey found many small employers willing to give ex-mental patients trial employment. This experience may have had a positive effect on hiring, because the study found that small employers had actually hired more ex-mental patients than the large ones.

The success of individuals with disabilities involved in OJT experiences can be affected by a variety of factors. During a survey of Philadelphia firms, Bauman and Yoder (1965) studied individuals with blindness in on-the-job training programs and found that, for those rated as faster in learning the job than sighted co-workers, 76.5% were rated superior in OJT. A mildly positive relationship between ratings of speed in learning and general OJT success was identified. The survey also identified a relationship between success in OJT and the need to make special concessions or changes in the job. Success in OJT was associated with few changes in job design.

Job readiness and work adjustment training programs are clearly needed for the segment of the disabled population disadvantaged in such areas as limited education, prejudice, and limited work experience (Berkeley Planning Associates, 1982, p. 97). Department of Labor survey respondents suggested the use of more subsidized employment programs, income supplements during OJT, counseling, supervision, performance evaluation and other support from public agencies (Berkeley Planning Associates, 1982).

From this and other surveys it would appear that employers have valuable suggestions on ways to improve on-the-job training experiences for individuals with disabilities. This has been advocated for some time. For example, during a San Francisco survey (Bluett & Hill, 1946) employers suggested; "Ask the employers to use handicapped persons on a trial basis for extra work, vacation, relief, etc. Suggest specific cases for these trials." If programs already in existence are to be improved and new ones developed, it is important to continue to solicit such advice from employers who know what training their new employees need and how and where they would like the training to occur.

Summary

The hiring process is one marked by subjective decision-making about the potential employability of applicants. When confronted with an applicant with a disability, employers have an added dimension to factor into the employability estimate. As has been repeated many times, employers generally have negative attitudes about people with disabilities when work potential is considered. This chapter has provided a review of the concerns involved in the hiring process and the considerations employers report when persons with disabilities are involved. The review addressed the hiring process from application through special tests. Additional examinations were made of the legislative requirements for affirmative action and on-the-job training as a vehicle for entry into the work force.

The review of the application process revealed that employers assign differential weights to factors collected on the application form--they pay particular attention to basic skills and literacy. Job applicants are expected to conduct themselves as independently as possible during the application process and the interview. The disclosure of disability will likely raise a red flag for the employer--the available evidence is that many employers have serious concerns about the applicant when a disability is reported. Because attitudes are affected by the type and severity of the disability, the style and manner of disclosure should be a major consideration for job applicants with disabilities. The applicant who is disabled should be prepared to present information which might offset the negative connotations assigned to the disability by the employer.

The job interview may be more critical than the application because it is the primary vehicle used to make the employment decision. A great deal of importance is attached to the appearance, social skills, physical capacities, intelligence and independence of the applicant during the interview process. Particularly important to employers are social and communication skills. The ability to explain a disability and resulting functional limitations is a vital element in the interview. Finally, employers use the independence of the applicant in the interview as a proxy for future work performance, and a spread effect to a variety of performance elements in the work setting often results. Therefore, the ability of the applicant to demonstrate independent functioning during the interview is a critical factor in the hiring process.

In the past, physical examinations were often used to exclude qualified workers with disabilities from securing employment. This practice is now illegal in many areas, and represents a clear violation of law unless it can be shown that the impairment prevents the person from performing the work satisfactorily. Most of the surveys in this area dealt with cardiac disabilities, and employers were concerned about possible compensation costs. Little current information about the use of physical examinations in regard to workers with disabilities is available. However, many jobs do not involve pre-employment physical examinations; and applicants who are disabled may have less difficulty in these settings.

The identification of specific jobs for applicants with disabilities is another major component of the hiring process. Research studies were found addressing this procedure in regard to cardiac disabilities, emotional disabilities, mental disabilities, and epilepsy. A modest positive trend was noted in employer receptivity to the four groups, with the most optimistic findings reported in the studies on epilepsy. Employers in these surveys seemed to hedge when asked to identify specific jobs for workers with disabilities, and tended to focus on lower level, unskilled jobs. This is likely the result of stereotypes employers have in regard to different types of disabilities. The results reinforce the need for rehabilitation practitioners and advocates for persons with disabilities to continue the educational effort with employers in regard to the wide range of jobs which persons with disabilities are capable of performing.

Special tests for employment are not commonly used in many of the 'traditional' jobs held by workers with disabilities. These have often been secondary labor market jobs with lower pay, fewer benefits, and other characteristics indicative of less desirable employment. Where information is available on waivers from required tests, workers who are disabled have proven successful in subsequent work performance. However, this evidence is based on one study. Overall, there appears to be a trend away from formal employment tests in favor of situational assessment

or on-the-job tryouts. The monograph by Sherman and Robinson (1982) is a valuable resource to rehabilitation practitioners for information on employment testing and persons with disabilities.

Employers need considerable help in implementing their affirmative action programs for individuals who are disabled, including the hiring process. A particular need reported in one national study was for assistance in the location and screening of applicants with disabilities. The most recent study of job accommodations revealed employers to be concerned about the requirement for reasonable accommodations for workers with disabilities, a factor which may result in resistance to hiring the applicant when the employer is afraid or unsure of the extent of modifications and costs for which he/she is liable. The implications from recent court settlements are fairly obvious--employers covered by Federal affirmative action legislation for workers with disabilities are required to hire applicants with disabilities, and failure to do so or discrimination may result in fines and other legal action. Pati and Adkins (1980) provide excellent information on positive employer experiences in the initiation of affirmative action programs for workers with disabilities. The DOL survey also provides information on a variety of accommodation practices in major national corporations (Berkeley Planning Associates, 1982).

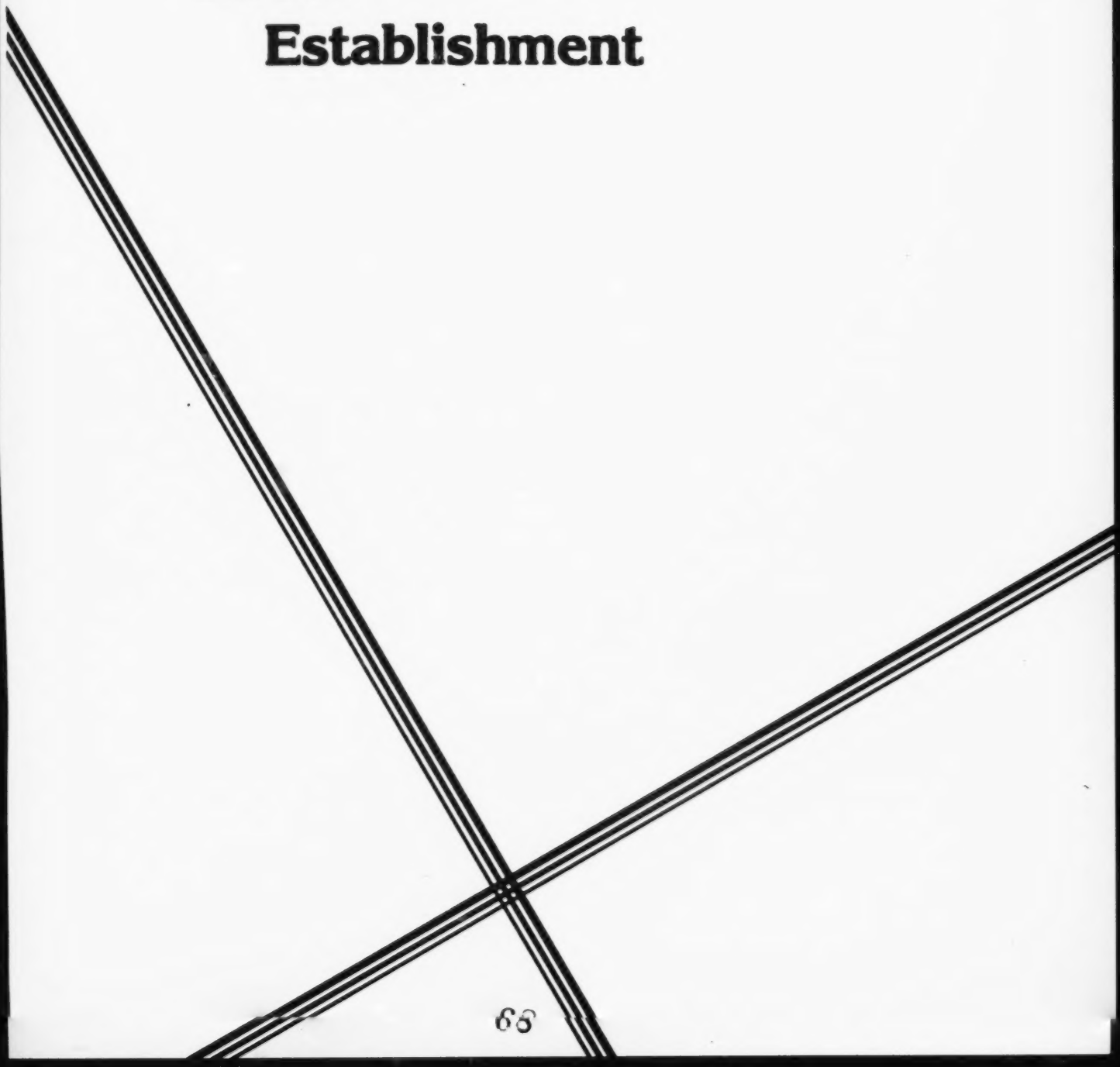
On-the-job training (OJT) was reviewed in relation to the hiring process since this technique not only provides an opportunity to acquire training benefits but serves as an entree to the labor market. This experience provides an opportunity for some persons with disabilities to demonstrate work skills and work-related habits and attitudes to the employer. The limited survey research on the OJT performance of workers with disabilities (ex-mental patients and individuals with mental retardation) indicates that employers favorably rate the performance of these individuals in comparison with non-disabled workers. Also, available information suggests that smaller employers and certain types of employers (food service, clerical, custodial, and related) are more receptive to the use of OJT's. Based on the limited evidence, this is a very good approach for some workers with disabilities to demonstrate their performance capabilities to employers. Rehabilitation practitioners should consider broader use of OJT techniques in selected employment settings. Such programs provide opportunities for smaller employers who may not have the resources to screen and train workers who are disabled.

The overall assessment of employer concerns relative to the hiring process indicates that the application and interview are critical. The job applicant with a disability should be prepared to complete the application process independently, and ready to offer information which may offset the negative reactions many employers have to disability reported on the application or during the interview. Attention to appearance, mannerisms,

social skills, and appropriate responses is necessary. Rehabilitation counselors should be particularly attentive to the skills the person with a disability has in interviewing and completing applications for employment.

Since many employers do not use physical examinations or special tests during the hiring process, these do not appear to be as problemmatic for workers with disabilities as some other areas. Employers should be approached about waivers and alternative evaluation procedures when such examinations are involved. Evidence regarding performance of workers with disabilities who have been given waivers, although limited, is positive. This information should be shared with employers--thus encouraging them to use such techniques. Employers desire and need technical assistance during the screening and selection process for applicants with disabilities, and rehabilitation practitioners should move to fill this need. The job identification process is another area where rehabilitation practitioners can conduct job analyses and assist employers in understanding the wide range of jobs which workers with disabilities can fill. This and other areas are indeed appropriate initiatives for rehabilitation organizations to market services to employers in exchange for employment opportunities for their clients.

Career Establishment



Orientation

Once an individual with a disability has been hired, the employer's concern focuses on orientation and integration of the newly hired employee into the organization (Hartlage & Roland, 1971). A number of factors cause employers to anticipate difficulty during the orientation period. In particular, they are unsure how their present employees will react to working with a person who is disabled (Salzberg et al, 1961). Employers all too often feel that people with disabilities have trouble adjusting to new situations, particularly work, and require additional time and supervision (Bervin & Driscoll, 1981; Bolanovich & Rasmussen, 1968; Hartlage, 1965; Hartlage & Roland, 1971; Hartlage, Roland, & Taraba, 1971; Hartlage & Taraba, 1971; Williams, 1972).

A number of surveys indicate employers are concerned that individuals with certain disabilities have personal attitudes and emotional characteristics which make it difficult to identify job assignments appropriate for them (Greenspan & Shoultz, 1981; Hart, 1962; Jennings, 1951; National Committee, 1969; Olshansky, Grob, & Malamud, 1958; Phelps, 1965; Salzberg, et al, 1961; Schletzer et al, 1961; & Simon, 1963). Employers also feel that workers with disabilities are unable to use all available resources to manage new and changing situations (Smith, 1964). In addition, it is difficult for employers to anticipate the possible problems that may occur, and to distribute work assignments accordingly (Florian, 1973).

Another factor which reduces the effectiveness of orientation is an individual's ability to conceal a disability. It is possible for individuals with cardiac conditions, epilepsy and mental illness to conceal the disability during the employment process. The stigma and stereotypes ascribed to such conditions may make it advisable to do so, for disclosure of these particular disabilities may prejudice acceptance by fellow workers (Olshansky, 1958; Rickard et al, 1962). Therefore, many workers with disabilities, particularly ex-mental patients, may be unknown to their employers (Linder & Landy, 1958). In addition, employers who are sympathetic may react by directing the new employee not to tell anyone else in the organization about the disability (Farina & Felner, 1973). These factors prevent the informal orientation often provided when foremen, supervisors, and co-workers are aware of the invisible disability.

Employers' concerns about orientation for workers with disabilities have existed for a long time. For example, Peckham (1951) found that workers who are mentally retarded could not be successfully placed on a job without follow-up contacts with the company representative responsible for orientation. In providing orientation for workers with disabilities, employers have used

the services of outside agencies with mixed results. Traditionally, problems have resulted from (1) premature termination of services and (2) the quality of the service provided. For example, Lehman (1951) found the New York State Employment Service terminated services shortly after placement.

On the other hand, agencies have developed orientation programs that employers find to have beneficial features. Such a program for ex-mental patients at a Veterans Administration Hospital was identified by Margolin (1961) and discussed in the preceding chapter. The program combined work conditioning in the hospital with employer development and extensive follow-up.

A growing number of organizations have found that they can address their company's unique needs by developing in-house orientation programs. Evidence in support of this is revealed by the fact that only one percent of a national survey on independent orientation programs had asked for or received available funds from the Federal government (Ellner & Bender, 1980).

Employers who use independent orientation programs have found them beneficial both to new employees with disabilities and to their co-workers. One approach, the buddy system, has been used with employees who are mentally retarded and physically disabled (Eggers, 1960; Ellner & Bender, 1980). The buddy system (coupling new employee with experienced worker) provides rewards for both employees (Ellner & Bender, 1980). Such systems are apparently not widely used. In a survey of Atlanta employment organizations, Eggers (1960) found that only 2 of the 15 respondents followed a regular practice of using able-bodied workers to help orient newly-hired employees with disabilities. Management personnel reported reluctance to ask co-workers to serve as "buddies" because such assistance might require excessive time and adversely affect the income of the co-worker.

A growing number of organizations provide programs to prepare supervisory personnel to induct newly hired employees with disabilities into company practices. Lockheed, Hewlett-Packard and Kaiser are using supervisory training programs (Ellner & Bender, 1980). Films and other instructional programs are also becoming available for co-worker orientation to disability. For example, the Trunkline Gas Company uses a film to help managers become more comfortable with workers with disabilities (Ellner & Bender, 1980). A similar process is reported for other major national corporations.

Skill Training

Surveys reveal skill training to be a major concern of employers of workers with disabilities. One-half of the personnel managers and one-third of the supervisors in a national survey felt it was hard to find jobs that physically disabled workers were trained to do (Schletzer et al, 1961). In a

Philadelphia survey, employers with clerical, industrial and service jobs found that 40% of their employees with blindness had no prior training related to jobs within their companies (Bauman & Yoder, 1965). When Wilson and Richards (1975) asked employers about disabled Vietnam veterans as workers, lack of training was identified as the major barrier to employment. However, veterans with a college education faced minimal employment impairments. It would appear from these findings that training and preparation for work can help to mitigate the restrictive effects of a disability.

Employers are most concerned about the completely untrained worker with a disability (Ellner & Bender, 1980; Wilson & Richards, 1975). Such employees are initially suited only for low-level jobs. A southern California survey found that placement at the laborer level was twice as likely for individuals with disabilities as placement at the management level (Grace, 1970). According to the AMA survey, nonskilled and semiskilled jobs were filled by a significantly higher percentage of employees with disabilities (Ellner & Bender, 1980).

Adaptability in performing a variety of jobs and availability of lower level jobs were found to be of moderate concern to employers in a survey of Fortune 500 companies (Mithaug, 1980). In addition, some survey respondents report that workers with disabilities who lack training are unwilling to begin at the bottom (Hart, 1962). The new employee with general work experience but a lack of specific training is another source of concern for employers of individuals with disabilities. Organizations may have only a few jobs that can be handled by them (Wilson & Richards, 1975).

Skill training can provide an answer to these dilemmas. Employers feel that workers with disabilities can benefit from training. Eighty-five percent of supervisors at an Air Force installation felt that the trainability of their workers with disabilities was comparable to that of other employees (Simon, 1963).

Survey respondents have identified several important considerations in providing skill training for employees with disabilities. The cost of specialized training is a primary factor in determining whether a company can offer a program. Respondents from a survey in Minnesota reported that training costs would likely vary for different disability groups, particularly for employees who are mentally retarded, blind, deaf, or have one arm (Williams, 1972). Four out of twelve participants in an Atlanta survey reported that extra costs were involved in training and retraining employees who are physically disabled, even though all twelve companies provided the same training program for non-disabled and disabled workers (Eggers, 1960).

Many organizations, particularly smaller firms, lack the necessary facilities to provide training (Hamilton & Roessner, 1972). They prefer employees to be job ready when hired (Stewart, 1974). Large companies are more likely to have the capacity to conduct training and may prefer to train their own employees (Hamilton & Roessner, 1972). For them, previous training and experience are not as essential.

Some organizations, like du Pont, have found that VR centers can provide the skill training their employees with disabilities need (Berkeley Planning Associates, 1982; Hart, 1962). Participants in a national survey felt that not enough people within private industry were aware of the training aspect of the VR process (Schletzer et al, 1961).

Some companies are involved in developing external training and placement programs in cooperation with community agencies. The DOL survey reported that firms such as IBM and Union Carbide have collaborated with educational institutions and rehabilitation organizations to conduct such programs (Berkeley Planning Associates, 1982).

Employers have reported that the amount and type of skill training required varies with different disabilities. A survey of Massachusetts, New Hampshire and Vermont hospitals found employers less likely to hire workers with cerebral palsy who might require considerable training to circumvent their functional limitations (Threlkeld & DeJong, 1982). Employers have also found that certain factors are not amenable to skill training (e.g., personal attitude). During hospital lab training, failures for trainees with disabilities tended to be associated with some functional limitation, such as hand tremors, that could not be circumvented by providing an accessible environment (National Committee, 1969). Hospital directors in the survey stated that pressures in laboratory training were great, and they were reluctant to take students with emotional disabilities.

Surveys reveal that accommodative training is not likely to be provided by employers who feel that workers who are mentally retarded are suited only to less complex jobs (Smith, 1981). In some studies, employers of persons who are mentally retarded have regarded this group as a good source of unskilled and semi-skilled labor--for example, jobs as porters and personal service workers are seen to be appropriate (Bolanovich & Rassmussen, 1968; Hartlage, 1965; Smith, 1981). Sixty-four percent of survey participants from southern states reported having jobs suitable for mentally retarded workers in unskilled areas (Smith, 1981). One firm reported that employees who are mentally retarded present a real placement challenge, because the simpler assembly tasks tend to be subcontracted out (Berkeley Planning Associates, 1982).

A survey of the Boston area found that employer concerns about the unpredictable behavior and incompatibility of ex-mental patients caused them to channel such employees into unskilled jobs characterized by minimal interpersonal contacts, low skill requirements and limited oportunities for advancement (Olshansky et al., 1958).

Skill training is less consequential when individuals with disabilities are hired for those jobs considered to be marginal. The lack of oportunity for skill training can prevent advancement and contribute to the low valuation some individuals with disabilities place on themselves when applying for low level positions. A Los Angeles survey found a number of ex-mental patients in lower level jobs because they apparently could not perform at the skill level they held prior to illness (Salzberg et al, 1961). Survey participants in Massachusetts felt that ex-mental patients should be work-conditioned before being placed (Margolin, 1961). The work performance of ex-mental patients who had received work conditioning training was rated by employers as equal to that of co-workers.

Employers reported that skill training can be augmented by careful placement (Simon, 1963). For instance, in hospital laboratories, employees with severe disabilities were placed in labs where movement was minimized and then trained for that setting (National Committee, 1970).

Skill training can help to compensate for prejudice by increasing the competence of the worker (Rickard, 1962). Without preparation and training, the individual's best chance for placement is likely to be at the laborer level of a large manufacturer (Grace, 1967). In order to advance, employees with disabilities need the benefit of specialized training just as non-disabled employees do. Employers who wish to tap the full productive potential of their employees with disabilities may find skill training a satisfactory method.

Accessibility

Some employers involved in placing workers with disabilities are concerned about the inadequacy of physical facilities (Mithaug, 1980). They acknowledge a need to identify remedies for architectural barriers (Akabas, 1976). However, many employers confess to being "woefully unaware of the requirements for making their workplace accessible" (National Easter Seal Society, 1979, p. 3). Others are confused by conflicting regulations (Ellner & Bender, 1980). Survey respondents concur that a major problem in developing an accessible workplace results from "conflicts between the specifications required by a building code or state law that differs from a federal regulation or even between a regulation issued by one federal agency with that issued by another" (National Easter Seal Society, 1979, p. 3).

During a Conference on Corporate Response to Accessibility conducted by the National Easter Seal Society, major corporations from building, banking, manufacturing, and real estate developed the following recommendations (Easter Seal Society, 1979, pp. 5-7):

1. Standardization in the regulations--ideally, a uniform design standard that promotes the concept of universal barrier-free design; useable by disabled and non-disabled alike.

2. Coordination of specifications between building code officials, state/municipal government officials and federal regulations.

3. One federal agency designated to inspect and certify that buildings meet accessibility regulations and technical assistance for their compliance, as well as a systematic appeal procedure coordinated through a network that reflects local, state, and federal requirements and information on remedies made available through a central agency.

4. An application manual designed to permit flexibility by applying national standards to local situations, providing information on actual experiences in remodeling a variety of existing structures and a clearer understanding of costs and other factors involved in making these buildings accessible.

In addition, conference participants felt they could use information identifying the populations best served by accessible features in the work environment. A newsletter or other information sharing medium to disseminate accesibility technology, product information, accessibility regulations and research in related rehabilitation areas was suggested. Participants stressed that architecture students need instruction in principles of barrier-free design.

The AMA survey also found employers complaining about the plethora of regulations issued by the Federal government to implement Section 503 (Ellner & Bender, 1980). The U.S. Architectural and Transporation Barriers Compliance Board made the following statement in 1979 (Ellner & Bender, 1980, p. 28):

> Now the American National Standard Institute's (ANSI) standards are the federal minimum. They're being revised and expanded to include such critical areas as housing. From a consensus of about 70 agencies and organizations involved in the revision, a new ANSI is expected. Meanwhile, about four different national building codes and as many federal standards are used, leaving more confusion about uniformity.

Despite the initial controversy and confusion surrounding accessibility, physical barrier removal has gradually become more common in industry. By 1982 the DOL survey found considerable improvements in the physical accessibility of respondents' facilities (Berkeley Planning Associates, 1982). Seventy-two percent of the Federal contractors in the DOL survey reported parking or curb cuts, 64% had ramped exterior entrances, 67% had widened doorways, 49% had elevators, 62% had bathroom access, and 67% had general access throughout the whole plant (Berkeley Planning Associates, 1982). For the more refined aspects of barrier-free design reports were also positive: 40% of the firms had audible and visual alarm systems, 13% had Braille markings, 31% had lowered fountains, and 29% had lowered phones. Altogether, 24% of the firms reported making four or more different types of modifications. Ninety percent of these environmental changes reported in the DOL study were made after the passage of the Rehabilitation Act of 1973 (Berkeley Planning Associates, 1982). Despite the regulatory confusion, and publicity surrounding the Act, Section 503 apparently stimulated architectural barrier removal on the part of Federal contractors and others.

A number of companies in the DOL survey developed noteworthy organizational schemes to address the task of making their facilities accessible (Berkeley Planning Associates, 1982). To illustrate, IBM implemented a five year plan in the following phases (Berkeley Planning Associates, 1982, p. 51):

* Areas with high incidence of public access, e.g., central employment, education centers, corporate headquarters, and wherever there is concentration of handicapped employees.

* Areas with large populations, e.g., Division headquarters.

* All IBM-owned facilities and all leased facilities.

IBM also prepared internal standards for accessibility to meet or exceed state and Federal standards.

Hewlett-Packard, another participant in the DOL survey, used employees with disabilities as "consultants" while making its facilities accessible (Berkeley Planning Associates, 1982).

Approaches such as these demonstrate that planning for accessibility modifications can make the achievement of a barrier-free workplace possible. It can also make the process less expensive because, when properly planned, the cost of barrier-free construction is a small fraction of the total cost of new buildings (Ellner & Bender, 1980). A major corporate executive reported that, "in the construction of new buildings costs are negligible when ramps and other features required by handicapped persons are incorporated early in the design stage"

(Ellner & Bender, 1980, p. 48). For this reason, barrier removal has been most common in the design of new facilities. DOL survey respondents reported the removal of barriers in older facilities to be difficult and sometimes impractical (Berkeley Planning Associates, 1982).

Employer concern about the expense involved in creating barrier free work environments has been around for a long time. DOL survey participants confessed that, particularly in times of economic recession, costs are weighed carefully (Berkeley Planning Associates, 1982). Many firms believe that costs for altering facilities are excessive. For example, when one national corporation planned to modernize its office buildings, accessibility costs were estimated to be hundreds of thousands of dollars but the actual cost turned out to be only $8,500 (Ellner & Bender, 1980, p. 48).

Most (88.4%) respondents in the AMA survey had not made use of external agencies for technical assistance or funds for accessibility modifications (Ellner & Bender, 1980). Of the remainder using public assistance, one-third felt the agency providing the assistance had been helpful in cost reductions.

Only "reasonable" accommodations are mandated by the legislation, and surveys show a number of employers have learned to modify work environments reasonably. This is evident in the findings of a survey of 2,719 companies by the U.S. Chamber of Commerce and the National Association of Manufacturers. Respondents reported that "most disabled employees required no special work arrangements--an entrance ramp or height-altered workbench frequently provided sufficient accommodation" (Ellner & Bender, 1980, p. 32). These findings were corroborated by AMA (1980) survey respondents who reported that appreciable changes were not needed in their facilities to accommodate workers with disabilities. Their efforts were primarily directed toward arranging parking adjacent to buildings, altering entrance passages by installing ramps and handrails, and opening lavatory facilities. In keeping with these findings, the DOL survey respondents reported that adaptations to make the work environment accessible accounted for only 21% of all reported accommodations (Berkeley Planning Associates, 1982). Equipment, assistance, job modification, training, transfer and orientation were more commonly used accommodative procedures.

Structural modifications are not always necessary to achieve accessibility. According to a Hewlett-Packard executive, "We can always modify the job rather than the building. We limit our architectural.changes only to our existing buildings where the cost of modification is not excessive" (Ellner & Bender, 1980, p. 51).

"Reasonable" accommodation at Lockheed is described by an executive: "Our barrier removal program provides for such changes

as wider doors, ramps, curbs, specially equipped restrooms, parking spaces, and so forth. We do everything reasonable to accommodate a handicapped person's limitations, including modifications to work areas where needed." Asked what he meant by "reasonable", he responded: "Well, thus far we have had no unreasonable requirements for major changes. Most of our buildings are one-story affairs, so problems such as installing elevators do not come up. Every situation is handled separately, and, of course, we use our judgment in determining what we consider to be reasonable or not" (Ellner & Bender, 1980, p. 49).

In light of these findings, it becomes obvious that what is needed is the sharing of accurate, updated information on what is required, what is available, what is desirable, and what has been effective in developing accessible work environments. Because of the lack of clarity of the various definitions in the regulations and because of confused perceptions about what is required and the extent to which it is being enforced, the regulations have not had as great an impact as was perhaps intended (Berkeley Planning Associates, 1982).

Work Site Accommodation

Accommodations for workers with disabilities take many forms; adapting the work environment or the location of the job, retraining or selectively placing the worker in jobs needing no accommodation, providing special equipment or aids, and redesigning the job. Surveys reveal that impediments precluding the use of such modification have changed over the years.

Early surveys found employers concerned about the cost of altering the work site. Seven of twelve Atlanta respondents cited the extra cost and difficulty of adapting machinery and workplaces (Eggers, 1960). For example, an entire production process is slowed if one person holds back an assembly line pace. Minnesota respondents acknowledged that work station modification can also be expensive (Reeder & Donahue, 1958).

Contemporary employers with affirmative action programs are required under "Compliance Responsibility for Equal Employment Opportunity" in the Federal Register, to make reasonable accommodation to the physical and mental limitations of persons with disabilities. However, these accommodations are not "to impose an undue hardship on the conduct of the contractor's business" (Federal Register, Vol. 43, No. 204, October 20, 1978, p. 49277). Accommodations may take into account both financial costs and business necessity.

During the DOL survey of Federal contractors, participants reported that accommodation is "no big deal" (Berkeley Planning Associates, 1982). Fifty-one percent of reported accommodations cost nothing (Berkeley Planning Associates, 1982). Rarely was cost cited as an impediment. Accommodation efforts were

generally perceived as successful in allowing workers to be effective on the job. Although accommodations were not related directly to promotions, some firms reported that the accommodation would benefit the employee if promoted to a new job; and some stated that nondisabled workers also benefitted from the accommodation. Firms reported that accommodation was undertaken because it was good business practice, like the provision of tools for nondisabled workers.

Participants in the DOL survey reported that some worksites were inherently "too unsafe for accommodation to be feasible for handicapped workers" (Berkeley Planning Associates, 1982, p. 40). Twenty percent of the personnel managers and first-line supervisors in a national survey agreed that jobs within their firms could not be restructured so that workers with impairments could handle them (Schletzer et al, 1961). Hospital professionals in New Hampshire, Vermont and Massachusetts, reported the perception that some jobs could not be done by workers with physical disabilities--a belief which serves as a major obstacle to jobs in this field (Threlkeld & DeJong, 1982). The survey found that physical requirements for sixteen specific hospital positions were crucial in determining the employability of individuals with cerebral palsy, double amputation, and wheelchair confinement. Six of the eight jobs deemed appropriate for workers with such disabilities were low in physical demands.

A survey of Massachusetts employers found that modernization sometimes has an adverse effect on accommodation (Hart, 1962). The personnel manager of a bakery, who had previously hired many deaf individuals reported discontinuing the practice after installation of an intercommunication system.

A number of employers have found little or no impediment in providing work site accommodation for their employees with disabilities. The Gillette Safety Razor Company reported that "instances where special considerations had to be given to employees with cardiac disease were rare" (Greer, 1957, p. 386). Fifty-five percent of the Philadelphia employers surveyed had made no change in clerical, industrial, and service jobs for employees with blindness (Bauman & Yoder, 1965). Eight percent provided special tools or machines, four percent made special safety arrangements, eight percent gave assistance with the work task, three percent provided a guide within the plant, and seven percent did not allow blind employees to complete certain sections of the work task.

The AMA survey found that 68% of the responding firms had not restructured jobs or redesigned work stations (Ellner & Bender, 1980). Only seven percent had restructured jobs and eight percent had redesigned work stations within selected areas.

Many employers relate the impairment to job requirements (Rickard, 1962). For example, at du Pont, a participant in the

DOL survey, modification of individual employees' job duties emerged as a significant form of accommodation (Berkeley Planning Associates, 1982).

Surveys have found that no particular type of work site accommodation dominates (Berkeley Planning Associates, 1982). Each accommodation is different and involves considerable judgement. While many firms do not have highly innovative programs with individualized modifications, a number of companies provide innovative accommodations. Respondents in the AMA survey provided the following examples (Ellner & Bender, 1982, p. 51):

* Assigning handicapped employees to areas that are already accessible instead of altering other areas;

* Replacing knobs on a microfilm viewer with levers so a cerebral palsied employee can have access to source documents;

* Using rubber stamps instead of conventional templates, so that a computer programmer with severe spasticity can draw logic charts;

* Modifying tape recorder keys so that workers with minimal hand function can use the recorder as a notebook;

* Using a plastic overlay with outlines and windows to help a visually impaired employee read data entry forms;

* Providing protractors, compasses, and other equipment that is marked in braille, or providing talking calculators;

* Modifying work schedules.

Employers may not be well informed about simple, inexpensive modification strategies that permit individuals with various disabilities to perform work satisfactorily. When employers regard work site alteration as complex, expensive, and required for most workers with disabilities, resistance to hiring can result.

Surveys have not explored employers' reactions to job analysis as a means of work site accommodation. This need was identified by a business representative of the New York Chamber of Commerce and Industry, who noted, "There has been very little opportunity for education of the people who train and employ. We didn't know in which jobs to hire the handicapped; we need someone around not to give us a list but to help us think about restructuring. I was surprised to learn that there were blind typists; I couldn't understand how a blind typist would know when

she was making a mistake. The explanation was that someone else has the job of proofing typed material. The job of typist wasn't restructured in my head to include this idea. I have to change my mentality" (Akabas, 1976, p. 23).

Generally, surveys of employers have not solicited their input on the utility of job analysis in accommodating employees with disabilities within their place of business. At this time, it is difficult to determine how informed employers are about the practice of job analysis and how inclined they are to accept such a technique as appropriate for their firm.

Summary

This chapter has addressed the initiation of work and employers' concerns about the establishment of new employees with disabilities within the work place. Orientation, skill training, accessibility, and work site accommodations were the major topics of the review. In most instances, employers expect workers with disabilities to participate in the orientation process in the same way as non-disabled workers. However, some promising techniques have been used to assist new employees with disabilities. The 'buddy' system has been successful and should be utilized more frequently to help the new worker learn the ropes. The assignment of buddies allows for orientation to both the formal and informal aspects of the work setting. In some cases there is a need to provide information and supportive counseling to supervisors and co-workers during the early phases of work establishment. Rehabilitation practitioners should identify clients who may have difficulties in orientation to a new work environment and be prepared to assist in making this critical period a success.

Large organizations are developing orientation programs to prepare co-workers to work with new employees who are disabled. Awareness programs are offered for supervisory and management personnel. Because of lingering concerns and stereotypes, awareness programs and orientation systems need to be employed more extensively. The rehabilitation practitioner should emphasize the importance of follow-up activities to insure that the new worker has been appropriately oriented to the work setting.

Employers are concerned about the skills workers with disabilities bring to the work setting. Smaller employers will probably not have the training programs which larger employers can provide. Therefore, smaller employers may be more concerned about entry level skills and immediate readiness to perform the job. Most employers allow a settling-in time for new employees to learn work protocols and develop speed. However, entry level skills are important and are likely to be even more important in the case of workers with disabilities.

For jobs which do not require extensive skills, the employer may emphasize work personality attributes such as flexibility,

perseverance, and positive attitudes. Regardless of the type of work, these attributes are important and the employer may be willing to invest considerable time and effort to train the person if these characteristics are present.

Structural changes have been reported by larger employers in order to make their operations accessible. Recent studies in this area indicate that many of the major corporations have made plants accessible and incorporated accessibility in their planning for new buildings and facilities. Cost is an important factor, and employers have examined a variety of alternatives to such expensive alterations as elevators. In many instances, jobs are found in locations where only minor accessibility modifications are required.

Finally, work site accommodations are taking place in many larger employment settings. Recent studies reveal that most modifications are inexpensive and involve minor physical modifications to the job site or job restructuring. Employers can benefit from technical assistance and rehabilitation practitioners should develop a repertoire of reasonable, cost effective examples of modifications to demonstrate to employers. The availability of the Job Accommodation Network should enhance information sharing and open even more opportunities for workers who are disabled. It appears that in most instances individuals with disabilities can have a wide range of opportunities available to them with only minor physical modifications or job restructuring.

Career Maintenance

If an employer is to ensure the survival and growth of a business organization, the efficiency of the workforce has to be maximized. Surveys have probed employers' concerns about productivity and other career maintenance factors in regard to employees with disabilities. This chapter addresses survey findings on these maintenance concerns.

Productivity

Quality and Quantity of Work Performance

Over the years, surveys have shown that the ability to do a job is the paramount factor in the employability of persons with disabilities. In a survey of personnel directors and school administrators, competence was found to exert the greatest influence in employment decisions across seven disabling conditions (Rickard, Triandis, & Patterson, 1977). In a later survey of large industrial firms, Mithaug (1980) found that the two most important factors in employment decisions were the ability to do the job and productivity. More recently employers indicate that while productivity is still a major concern they differentiate among disability groups on this issue (Fuqua, Rathbun & Gade, 1984). For example, productivity was reported as a serious concern when hiring an individual with blindness, but less of a concern with the job candidate with epilepsy.

Because survey participants consistently identify the ability to produce as the necessary, and sometimes sufficient ingredient of employment success, it should be addressed by any review of overall job performance. Surveys with employers have revealed some of the problems encountered in estimating and measuring work performance.

Problems in Obtaining Accurate Productivity Ratings. One source of error involves the selection of survey participants. In Bauman and Yoder's (1965) survey of firms with clerical, industrial, and service jobs in Philadelphia, all employer participants were referred by state and private agencies. This prevented a real sampling of employers because the survey authors interviewed only those employers "friendly" toward the agencies. Therefore, participants were very favorable to both the agency and workers with blindness.

Another potential source of error can result from the employer's expectation that disabling conditions limit the ability to produce. In a study to evaluate the results of the employment program for disabled workers at the Internal Revenue Service, Goodyear and Stude (1975) found a trend for supervisors to rate non-disabled co-workers slightly higher on performance criteria such as quality and quantity of work, learning and adapting to new tasks, and increased workload. While the ratings

for the disabled and non-disabled groups were not significantly different, the authors felt the trend might be due in part to the supervisors' expectations that physical disability limits ability.

Productivity ratings may also be compromised when employers are compelled to hire workers with disabilities. Israeli law requires that 5% of the workforce must consist of disabled war veterans. During a survey of both private and public employers in northern Israel, Florian (1978) found a common preconception that disabled employees work less rapidly and produce slightly less than nondisabled employees.

An example of efforts to reduce subjectivity in employer surveys is the University of Minnesota Studies in Vocational Rehabilitation project by Schletzer, Dawis, England and Lofquist (1961) which examined 800 personnel managers from 47 states and 510 supervisors from Minneapolis-St. Paul to determine their attitudes toward workers with disabilities. Responses to objectively verifiable situations showed most participants to be acquainted with the fact that the productivity of workers with disabilities is generally equal to that of nondisabled workers. Respondents tended to disagree with statements that workers with impairments were not as good as other workers.

In summary, the research on employer evaluations of workers with disabilities should be viewed with these limitations in mind. Methodological problems are often difficult to overcome because respondents must volunteer to participate and limited time is available to obtain data. Results are often based on subjective judgments rather than hard evidence of performance such as production quotas. Employers, like the rest of the population, may have negative attitudes about people with disabilities which can be compounded by concerns about employment.

Factors That Can Alter the Productivity Level. In addition to recognizing the above qualifications when evaluating research on employer receptivity, consideration must be given to the other variables which can have a mediating effect on productivity evaluations of workers with disabilities: 1) education, 2) motivation, 3) elevated sensitivity when sensory modalities are lost or diminished, 4) advances in medical science and technology, and 5) accommodations. While these are similar in some respects to factors which would influence performance evaluations of non-disabled workers, they are reviewed here in terms of relevance for workers with disabilities.

While technological advancement has produced a variety of accommodative devices, and medical research has contributed pharmacological interventions, education and the individual desire to excel continue to be important factors in productivity.

During a three year survey of manufacturing, apparel, printing, publishing, wholesale, retail, finance, insurance,

hotel and amusement firms in New York City, one-third of the respondents rated employees with disabilities as "better workers" FEGS, 1954, p. 24). Personnel officers felt the extraordinary motivation that persons with disabilities sometimes bring to the work situation resulted in overcompensation. Over half of the firms influenced by such "compensatory" behavior had knowingly hired persons with disabilities in the preceding year, while only one-fourth of the remaining firms had done so.

When Schletzer et al (1961) surveyed employers regarding their employees who were disabled, over 60% of the responding personnel managers and supervisors reported that these workers were "conscientious about doing a good job", and were more "resourceful when left on their own" (Schletzer, et al, 1961, pp. 17-18).

More recently du Pont (1982) surveyed supervisors and foremen who rated the performance of over 1,400 workers with disabilities. Ninety one percent were rated average or better (Ellner & Bender, 1980). They concluded that "a person suffering from the loss of a sense modality can often develop great sensitivity in the remaining modalities, e.g., loss of vision can encourage increased auditory or tactile sensitivity, which can result in better performance of certain jobs" (Ellner & Bender, 1980, pp. 32-33).

Several surveys have identified the role of education in productivity. The National Committee for Careers in Medical Technology (1969) survey of over 1900 hospital laboratories nationwide, followed by a study of a group of 693 laboratory employees with disabilities, found ninety-one percent rated as satisfactory workers. These employees represented many types of disabilities. Often the degree of their disability was severe. Many of the employees reported that they "had real difficulty breaking into the laboratory field before they had received training" (National Committee, 1969, p. 7). Many of the workers had education beyond high school. One of them, a supervisor of a bacteriology department, voiced the same thought: "The severely handicapped person needs an extra weapon, and that weapon is a better education than someone else has" (p. 7).

Bressler and Lacy (1980) surveyed career status civil service employees of the Air Force in six locations across the country. A population of 808 perceptibly physically disabled Caucasian males was compared with a random sample group drawn from each of the locations. Supervisory appraisals were used as the performance measure, along with promotion rate, salary attained, awards rate, suggestions approved rate, formal education, self-advancement rate and tenure. It was found that the non-disabled averaged slightly more promotions per year, had slightly higher supervisory ratings, substantially more salary, and a higher award rate (Bressler & Lacy, 1980, p. 138). On the other hand, the employees with disabilities had a higher number

of suggestions approved and had just slightly higher levels of educational advancement (Bressler & Lacy, 1980, p. 138). Although a general similarity existed among the subgroups based on disability, some differences are worth noting. Employees with visual impairments received the highest average performance rating, exceeding the non-disabled and rating considerably higher than the hearing and speech disabled. The latter group had the highest average salary of the three groups of disabled workers. This was not accounted for by tenure. In fact, the explanation for this salary difference was educational attainment, in which workers with hearing and speech disabilities exceeded the other groups, including the non-disabled.

Developments in medical science, particularly pharmacological interventions, have made it possible for workers with disabilities to be more productive. Anticonvulsant medications have improved dramatically in recent years and have increased the participation of persons with epilepsy in the workforce. While surveying four large industries in New York City, Udell (1960) found seizure control was related to performance ratings. Seventy-seven employees with epilepsy (mostly skilled workers) were compared with co-workers in their own work group as well as with the performance average for the entire company. While these employees were rated poorer than co-workers in their group, 76% were rated equal to or better than the company performance average. Two thirds of those rated equal to or better than their group had achieved good seizure control.

Surveys have revealed that accommodation of workers with disabilities is often undertaken to increase productivity. The DOL survey found "accommodations principally appear to serve to bring workers up to the company standard for productivity in a given job, not to give them any special advantage" (Berkeley Planning Associates, 1982, p. 32). In one-half of the cases of accommodation, the Federal contractors reported that the accommodation would continue to benefit the employee if promoted.

In a study of 54 disabled hospital laboratory workers (National Committee, 1969) few job modifications were reported. However, the work assignment was frequently specialized and selective placement was the role--i.e., matching position to person.

In conclusion, there are a number of factors which can affect the productivity of persons with disabilities in the work place. The problems some individuals have had in obtaining an adequate education place them at a disadvantage in work performance. However, the increased motivation exhibited by some individuals may counterbalance factors such as education. Additionally, in the case of sensory losses, compensatory mechanisms may come into play, aiding workers with disabilities in jobs where senses such as hearing and touch may be more valuable than sight for performing work tasks. Finally, advances in medi-

cine and accommodations through technology should make future work opportunities more available to persons with disabilities.

Varying Productivity Requirements. One additional factor of significance in reviewing the productivity evaluations of persons with disabilities is the variability across employment sites in job requirements. In some situations quantity of performance is more significant than quality while in other settings, creativity and innovation are valuable to the employer. The following section explores research literature relating to varying requirements for productivity.

Employers' expectations of quality and quantity in work performance vary with the type of industry and the type of position. Reeder and Donahue (1958) found that most firms surveyed had assembly production where the productivity of work units was interdependent, i.e., if one person were unable to maintain the pace, subsequent operations would be disrupted. Thirty-two of the 89 management personnel surveyed reported increased costs of operation as a result of such a slow down. These concerns led such employers in the survey to avoid workers with disabilities.

A survey of fifteen industrial plants in Atlanta (Eggers, 1960) revealed that most used incentive pay plans. Management in nine of the firms believed that production would be hurt if individuals with physical disabilities were employed.

Half of the St. Louis manufacturers surveyed by Bolanovich and Rasmussen (1968) reported a less than average performance from workers with mental retardation, noting some problems in work quality. However, 39% felt that such workers performed as well as their co-workers.

Surveys have generally not asked participants to identify requirements in detail or to relate them to specific job tasks. The resulting information has frequently been of a general nature, making it difficult for rehabilitation and placement practitioners to accurately determine what concerns employers have about the ability of job candidates with disabilities to meet productivity requirements. Three studies that do involve in-depth assessment of productivity requirements can be used for some guidance, although limited to teaching jobs. These studies identify the productivity requirements of workers in the teaching field in the kind of depth and detail needed by practitioners if they are to identify and alleviate employer concerns.

Nickoloff (1962) surveyed western school principals to solicit opinions of the effects of specific disabilities on teaching performance. To illustrate, although 16% of the principals did not wish to hire teachers from the "crutch" category, secondary principals were substantially less concerned than elementary principals, possibly because greater specialization at the secondary level reduces the importance of teacher mobility.

Principals felt that the teaching performance of an individual who stutters would be impaired because of the cultural role of speech in teaching.

Teachers who are blind or deaf were anticipated to have problems with discipline. Other major impediments to performance were felt to be problems in instructional communication, e.g., writing on the board and understanding of speech of students.

Nickoloff's findings were expanded by Ayer (1968, 1970) during two separate studies. Ayer's two projects provided detailed information about job performance.

In 1968, 58 Iowa administrators, teachers, and students were canvassed to determine how disabling conditions might affect teaching performance. A number of disabling conditions were viewed as stable, permanent loss of physical function not amenable to treatment that could facilitate teaching performance.

Many elementary teaching activities require verbal communication and visual observation, e.g., reading and writing require the teacher to follow, demonstrate, monitor auditory exchanges, correct, lead a discussion, present new material, and to control behavior. The respondents rejected most severe disorders of communication, emphasizing communication skills as basic pre-requisites for teaching.

In 1970, Ayer expanded the survey and enlarged the sample to include 405 Wisconsin school administrators. Four areas of professional responsibility were described for the respondents: (1) instruction, (2) protection, (3) community and (4) general employability (Ayer, 1970, p. 366).

Ayer found that younger administrators appeared to be more receptive to hiring teachers with disabilities. However, the older, experienced administrators may have been more realistic while younger repsondents may have been more idealistic.

Ayer reported that respondents perceived that neurologically impaired teachers would have problems with monitoring student behavior, disruptions in classroom procedures, discipline, and safe use of equipment and supplies. Teachers who may have seizures were seen as unable to represent the school effectively to gain support from the community.

Widespread disagreement was found about the potential of teachers with tuberculosis, heart disease and related fatigue.

Ayer's findings supported the importance of communication. More positive responses were made to teachers with impaired speech while teachers with deafness and total blindness were viewed as inadequate in all areas of professional concern. Ayer found reactions to teachers who used visual magnifers to be

highly selective, and depended on the restrictions of the disability and other personal qualities. Administrators reported that communication skills were essential for elementary school teaching.

These illustrations provide an indication of some of the problems involved in measuring work performance. The literature more frequently involves the "general" evaluations and not the more exacting assessments used by Ayer. The following section provides descriptions of general productivity evaluations made by employers.

General Productivity Evaluations

Unspecified Handicap. A number of surveys asked employers to evaluate the productivity of workers on the general basis of the presence of a disability.

During a 1980 survey, 89% of the Portland respondents and 98% of the San Francisco employers rated the performance of their workers with disabilities as being average or above when compared with co-workers (Zadny, 1980). When the Federal Office of Vocational Rehabilitation surveyed 100 large corporations nationwide (Ellner & Bender, 1980) asking them to compare work performance of employees with disabilities to non-disabled fellow workers, 24% found them to be better, 66% to be the same and 10% to be worse.

Mental Handicap. Burden (1970) found that employers from a VR program at the Georgia Mental Health Institute initially feared employing formerly emotionally disabled individuals. Most of their fears were alleviated by the work performance of the rehabilitants who competed successfully with the general employee population.

During a survey of 135 service employers in West Virginia, nursing home personnel managers reported that individuals who are mentally retarded expected to be given the easiest jobs (Phelps, 1965). Sixty-five percent of these employers indicated that individuals who are mentally retarded could work and that most employers have jobs they could perform.

In Nebraska, a survey of workers who are mentally retarded, who were unsuccessful in competitive employment, and who had been terminated involuntarily, found that only four of the thirty subjects had lost their jobs because of production deficiencies (Greenspan & Shoultz, 1981). The study revealed that the inability to do a job satisfactorily played a relatively small role in termination decisions.

In 1972, Williams surveyed 108 Minnesota employers from a variety of industries; 29% of the participants felt that the cost of their business would increase if they hired a person who was mentally retarded.

Physical Handicap. Personnel managers and supervisors from 47 states agreed that within their organizations "stability and knowledge were more highly valued than muscular strength and agility" (Schletzer et al., 1961, p. 22). The majority of participants from both groups reported that their organizations had workers with disabilities who had good employment records. Only 12% of the supervisors and 21% of the personnel managers felt that employees with physical disabilities produced less quantity. Both groups disagreed with the statements that workers with disabilities "took advantage of other people by not doing their fair share of work, did not have enough sense of responsibility to the company, did not work well in a situation involving team-work, expected to be given the easiest jobs to do, and always had to have someone present to tell them what to do next." (p. 17).

During a survey of 112 North Dakota firms, Gade and Toutges (1983) found the work performance of employees with epilepsy rated as equal to their co-workers in all areas including productivity. Williams (1972) found that only 18% of a sample of Minnesota employers felt the cost of operating their business would increase if they hired workers with blindness. During a survey of medical directors in nineteen organizations across the country, employees with cardiac conditions were considered to have higher than average productivity; only 3% of the participants regarded them as inefficient (Lee et al, 1957). This survey indicated that low productivity did not appear to be a major factor in determining the employment policy toward individuals with cardiac conditions.

The Gillette Safety Razor Company identified 20% of its plant population as premium workers and 50% as regular workers (Greer, 1959). Thirty-six percent of the employees with cardiac conditions belonged to the premium group and 55% were considered to be regular workers. Only 7% were included in a base performance group, and 1% were rated as unsatisfactory.

Olshansky, et al (1955) surveyed 100 employers in the Boston area and found twenty-four respondents who identified low productivity in their employees with cardiac conditions. Polner (1958) interviewed 18 Chicago firms largely involved in heavy industry. Although the respondents did not really know the extent of their employment of individuals with cardiac conditions, only two of the 18 gave the inability to produce as their main reason for refusing to hire additional workers with this disability.

Employers with Direct Experience with Workers with Disabilities

As a final statement for this review of productivity, sixteen studies from the group conducted between 1948 and 1984 were selected for closer examination because they used more direct methods to evaluate the work performance of persons with disabilities. The criterion for inclusion was that they involved

employer ratings or performance evaluations of employees with disabilities. Several of these studies have been discussed earlier in the review while others are introduced here. As can be seen from the following chronological list, the studies vary considerably in scope, type of disability and other important variables. Despite these differences, the thread of evidence running through all sixteen studies is consistent--workers with disabilities have not been shown to be inferior workers. Over the years, the available evidence indicates that most employees with disabilities are average to above average in work performance.

Highlights of the sixteen studies presented below list only their most relevant characteristics: 1) sample, 2) employer characteristics, and 3) results. Although the studies vary in methodological adequacy, the results are consistent. Additional information on methods used in these studies can be found in earlier sections of the review.

1. 1948 - Bureau of Labor Statistics

   * 11,000 workers with physical disabilities in manufacturing industries matched with 18,000 non-disabled co-workers.
   * Employer records of performance.
   * Physical disability did not produce an adverse effect on quantity or quality of work performance.

2. 1954 - Franco

   * 896 employees with cardiac disabilities employed by a large electric utility representing over 400 different job classifications.
   * Employer records of performance.
   * Twenty-eight percent were performing satisfactorily at their regular positions; 72% were on limited duty with about half performing their regular work and the other half assigned to lighter work.

3. 1957 - Greer

   * 208 employees with cardiac disabilities employed in a large manufacturing organization.
   * Employer records of performance.
   * These employees had slightly better performance ratings than the overall company averages (91% average or better for workers with disabilities compared to 70% average or better for non-disabled.)

4. 1960 - Udell

   * 77 persons with epilepsy employed in four organizations compared with co-workers.

* Supervisory ratings.
* No differences were found in performance ratings in 3 of 4 organizations; workers with disabilities were rated better in the 4th.

5. 1960 - Eggers

* 20 employees with psychiatric disabilities in Georgia.
* Employer ratings based on personal interviews.
* Most of the rehabilitants were competing successfully with general employee population.

6. 1963 - Simon

* 20% of the work force at an Air Force base with 40 foremen and 73 supervisors participating.
* Overall supervisory ratings.
* Workers with disabilities were rated as average or better by 61%, and not as good by 39% on productivity when compared with non-disabled workers.

7. 1963 - Carlson, Dawis, England & Lofquist

* 483 workers with physical disabilities from the Minneapolis/St. Paul area compared with 496 non-disabled co-workers.
* Supervisory ratings.
* Non-disabled workers were rated as more satisfactory on quality of work in mean comparisons. The disabled workers' mean was 3.42 while the non-disabled group had a mean of 3.58 with a 3 being 'about the same'. The ratings for both groups were quite high with 89.2% of the workers with disabilities and 91.3% of the non-disabled workers rated about the same, better, or much better than their co-workers.

8. 1965 - Bauman and Yoder

* 236 blind workers representing a range of employment settings, the largest being manufacturing.
* Supervisory (53%) and other management personnel.
* 88% were rated as superior or satisfactory in performance.

9. 1969 - Tinsley, Warnken, Weiss, Dawis and Lofquist

* 239 former clients of the Minnesota Division of Rehabilitation Services representing a wide range of disabling conditions compared with 523 co-workers.
* Supervisory ratings.
* 93.7% of the group with disabilities compared with 97.9% of the non-disabled group were rated average or above average on general job satisfactoriness.

10. 1969 - The National Committee on Careers in Medical Technology

    * 693 hospital laboratory employees with disabilities in a national sample, 54 personal interviews with employers.
    * Employer ratings.
    * 91% were rated as satisfactory workers in the mail survey and 48 of 54 (89%) were rated as satisfactory in the personal interviews with supervisors.

11. 1973 - du Pont

    * 1452 employees with disabilities of the du Pont Company matched with a non-disabled peer comparison sample.
    * Supervisory ratings.
    * Over 90% of both groups were rated average and above in performance of job duties.

12. 1975 - Goodyear and Stude

    * 21 employees with disabilities of the Internal Revenue Service matched with non-disabled co-workers.
    * Supervisory ratings.
    * No significant differences were found in performance ratings between the two groups on work quality, quantity or errors made.

13. 1980 - Bressler and Lacy

    * 808 perceptibly disabled civilian employees of an Air Force Command matched with non-disabled co-workers.
    * Supervisory appraisals.
    * Non-disabled employees had a slightly higher mean rating (93.38) when compared with the group of employees with disabilities (92.77). The difference was not significant.

14. 1981 - Green

    * 14 employees with disabilities in a CETA practicum matched with non-disabled co-workers.
    * Employer ratings.
    * Employees with disabilities were rated the same as or better than average employees.

15. 1982 - du Pont

    * 2745 employees with disabilities of the du Pont Company compared with matched non-disabled co-workers.
    * Supervisory ratings.
    * Over 90% of both groups were rated as average or above in the performance of job duties.

16. 1984 - Roessler and Bolton

* 38 former clients of the Arkansas Division of Rehabilitation Services.
* Employer ratings.
* 79% rated as average or above on quality of work and 82% rated as average or above on quantity of work.

Conclusive, unequivocal evidence that workers with disabilities perform as well as their non-disabled co-workers has been unavailable because of the aforementioned methodological inadequacies and the lack of hard data in employer surveys. However, the evidence that is available from these sixteen, most relevant studies is consistent and indicative of the fact that workers with disabilities measure up in the work place. While some of these studies indicate that more non-disabled workers receive higher than average performance ratings than handicapped workers, the evidence reveals that the workers with disabilities performed satisfactorily in all of the studies which included supervisory assessments of performance based on actual experience with workers with disabilities.

In summary, studies which involved assessments from employers or first line supervisors revealed more than adequate performance records for workers with disabilities. This is particularly true if the individual has been the recipient of rehabilitation services and trained for employment. Based on this evidence, employers have little to be concerned about in the performance area if they wish to consider persons with disabilities as employees.

Flexibility

Ideally, an employee will be versatile in both physical capabilities and skills. Schletzer et al (1961) found that personnel managers and supervisors agreed that job flexibility was of great importance, with 60% of the personnel managers and 75% of the supervisors indicating that a desirable employee is one capable of performing many jobs. A disability was often viewed as an impediment to flexibility. Seventy percent of the personnel managers and 60% of the supervisors felt that workers with physical disabilities were not as flexible in moving from job to job. In Atlanta, 12 of 15 survey participants believed that workers with disabilities could not readily transfer to a different position (Eggers, 1960).

The preconception that individuals with disabilities will be inflexible workers may adversely affect hiring decisions. Twenty-four percent of the participants in an early survey of the Boston area identified limited in-plant mobility as an important factor in the hiring decision for individuals with heart disease (Olshansky et al, 1955). Schletzer et al (1961) found that 52% of the 510 supervisors from Minneapolis/St. Paul agreed that new

employees should be able to perform several jobs. Fifty-four percent of the participants in a more recent survey reported that the lack of adaptibility to different jobs might affect their decision to hire a person with a disability (Mithaug, 1980).

When an employee becomes disabled during employment, the employer may feel that his/her ability to be flexible is also affected. Seventy percent of the 200 Boston employers surveyed by Olshansky (1958) were willing to rehire workers after a period of psychiatric hospitalization. The respondents were more receptive to their own employees who had experienced mental illness than to new applicants with such backgrounds. However, only about 30% viewed ex-mental patient employees as flexible. More than 40% considered unskilled positions as most appropriate for them. Sales jobs, positions with public contact, jobs with pressure and responsibility, supervisory, and hazardous jobs were avoided.

Paradoxically, organizations that accommodated the reduced flexibility of employees who become disabled during employment seemed to be less willing to consider applicants with disabilities. Eighty percent of the employers in the 1955 Boston survey tried to re-employ workers who developed heart conditions. Although 96% returned to full time work, making places for them interfered with finding suitable jobs for new applicants (Olshansky et al, 1955). Eight of the 15 participants in the Atlanta survey believed that their "first loyalty was to their own employees and that easier jobs should be reserved for aging and handicapped workers" (Eggers, 1960, p. 431). While 38% of the management group at the Gillette Safety Razor Company had evidence of cardiovascular disease, it was routine policy to reject any pre-employment applicant who had a heart murmur (Lee et al. 1957). For these leaders, however, there was no restriction of advancement in position because of the disability. All ten of the larger firms in a survey of Minneapolis/St. Paul stated they would re-employ any person who developed heart disease after employment (Reeder & Donahue, 1958). While these firms felt it was their "moral obligation to maintain disabled employees until the time of retirement or until an early retirement could be worked out for them, their policy of not hiring applicants with cardiac disease was an attempt to avoid such situations in the future" (Reeder & Donahue, 1958, p. 238).

Flexibility is a particular concern in small organizations where workers may frequently be required to perform two or three jobs. Participants in a Los Angeles survey who reported that they always or usually had difficulty in finding new jobs for employees who developed heart disease were often small firms who also cited versatility as a concern (Reeder, 1958). In fact, 23% maintained strict physical standards to ensure the versatility of new employees.

Large firms with a greater degree of specialization may be less concerned with the flexibility of employees. During a three

year study of large industries in New York City, seven of ten personnel officers stated that a need for employee versatility was not a major issue in considering handicapped applicants (FEGS, 1957). Only 13% were against hiring applicants with disabilities in order to save suitable jobs for their own long-time employees who might become disabled. However, a survey of Massachusetts employers revealed that the worker with a disability who is able to meet the physical demands of several operations within a small shop can acquire more skills, become more flexible, and therefore be more valuable both within the company and in the labor market (Hart, 1962). In contrast, within the large company, the worker with a disability is more likely to be put in a specific spot and kept there because "he is handicapped and is doing a fine job where he is" (Hart, 1962, p. 146).

Several surveys have asked employers to evaluate the flexibility of individuals with specific disabling conditions. Employers representing manufacturing, clerical, sales, and service jobs in the Louisville area, generally agreed there was little difference between an ex-mental patient and his non-disabled co-worker with respect to adaptability to jobs or increasing responsibility (Hartlage, 1961). Indianapolis and Bloomington employers expressed the most concern over former psychiatric patients' abilities to adjust to new work situations (Hartlage, 1971). This was also a concern for persons with amputations. St. Louis manufacturers employing more than 1,000 workers identified two major problems in hiring individuals who are mentally retarded: time required to become oriented and lack of flexibility (Bolanovich & Rasmussen, 1968). In Philadelphia, almost 40% of the employers with blind workers in clerical, industrial, and service positions felt they lacked flexibility (Bauman & Yoder, 1975).

Only one survey asked employers to evaluate the importance of flexibility in relation to operating costs that might increase if a person with a disability were hired instead of a non-disabled counterpart. Minnesota employers reported that cost was an important or very important consideration when the applicant had a back ailment, one leg, one arm, epilepsy or a serious heart condition, was deaf, blind or mentally retarded (Williams, 1972). Diabetes and peptic ulcers were not considered to affect costs by reducing flexibility.

One study at an Internal Revenue Service Center asked supervisors to compare workers with disabilities with their co-workers on flexibility items such as "learning new tasks", "undertaking new tasks" and "adaptability to the work environment" (Goodyear & Stude, 1975). There were no statistically significant differences between the two groups on these measures.

In the past, employers have attempted to compensate for a disabled employee's reduced flexibility. For example, when the Consolidated Edison Company felt that the increasing number of

older workers who developed heart disease posed a serious problem because the disability occurred during their most productive years when their skill and experience were of greatest value, the company responded by providing selective placement and medical services (Franco, 1954).

Employers have not always known how to introduce flexibility into the job positions within their organizations. In 1976, New York Chamber of Commerce and Industry members expressed uncertainty and a desire for further information. According to one business representative (Akabas, 1976, p. 23):

> There has been very little opportunity for education of the people who train and employ. We don't know in which jobs to hire the handicapped; we need someone around, not to give us a list but to help us think about restructuring. I was surprised to learn that there were blind typists; I couldn't understand how a blind typist would know when she was making a mistake. The explanation was that someone else had the job of proofing the material. The job of typist wasn't restructured in my head to include this idea. I have to change my mentality.

Contemporary employers are introducing flexibility into their organizations through accommodative practices. Organizational flexibility enables the employee with a disability to work productively. When the DOL survey asked Federal contractors to identify important factors in accommodation decisions, 24.8% cited improved productivity and 13.1% cited improved promotability (Berkeley Planning Associates, 1982). Over 50% of all manufacturing, service, and finance firms agreed that accommodation improved productivity. Improved promotability was important to over 50% of the financial institutions.

Such accommodations continue to be made more readily for existing employees who incur a disability than for disabled applicants (Berkeley Planning Associates, 1982). With existing workers, the level of productivity is known and there is less uncertainty about what will be gained from the accommodation decision. Such workers have more seniority and union support. The morale of the firm's labor force can be enhanced by accommodation of valued employees who become disabled (Berkeley Planning Associates, 1982). The DOL data does not indicate any tendency for accommodation to increase as the worker's seniority increases. However, the worker must acquire enough seniority to be considered "one of the family". In the words of one participant (Berkeley Planning Associates, 1982, p. 61):

> The modifications made to accommodate the needs of our current workforce were done to retain good dependable employees in most instances and to retain skills hard to replace. The monetary cost of these cannot be

assessed per se but the benefits do more than certainly offset them.

The DOL survey also found that highly skilled and influential employees were more likely to receive accommodations (Berkeley Planning Associates, 1982). Employees in high-skill occupations were also more likely to receive costly accommodations.

There are growing instances where the literature identifies accommodative devices and techniques that can and should be provided by the individual worker to ensure flexible performance on the job. Surveys have yet to canvass employers on the incidence and type of such independent accommodations. Rehabilitation professionals need to be aware that employers increasingly regard accommodation, whether provided by the organization or by the individual, as a means of increasing the flexibility of the worker who is disabled.

Stamina and Endurance

Over the years, survey authors have asked employers to evaluate the ability of workers with disabilities to tolerate the pressures of the work environment. Participants have generally been asked to make projections about the potential performance of hypothetical workers with certain disabling conditions. Efforts to objectively measure the actual effects of a disabling condition on an individual worker's level of production have been limited. Overall work tolerance, tolerance for pressure and speed, and physical capacity are three characteristics of stamina and endurance commonly explored during surveys of employers.

Overall Work Tolerance. Employers have been found to differentiate among types of disabilities when evaluating work tolerance potential. Survey participants from two cities in Indiana gave workers with amputations the highest work tolerance rating followed by employees with mental retardation and psychiatric disabilities (Hartlage & Roland, 1971). Despite the high rating, employers felt that workers with amputations might have potential problems achieving work tolerance. Employees with epilepsy, while rated as slightly below average in other areas, were reported as being above average in work potential.

Tolerance for Pressure and Speed. Surveys have found concern for a worker's ability to tolerate pressure and speed commonly focused on individuals with psychiatric disabilities. In 1958, 200 employers in the Boston area expressed concern about the ability of ex-mental patient employees to tolerate pressure and speed (Olshansky et al, 1958). Because these participants were unable to determine how appropriate amounts of pressure and speed might be measured, jobs requiring responsibility, supervision, and hazardous tasks were avoided. Eighty percent of the employers in a Louisville survey also identified the inability to

tolerate pressure as their most acute concern for ex-mental patient employees (Hartlage, 1961). Large manufacturing firms were most receptive, while small service organizations were least receptive.

Physical Capacity. The most common indicator of stamina and endurance explored during employer surveys is physical capacity, ability and limitation. In 1951, doubts about the stamina (i.e., physical abilities) of workers with disabilities were found to be prevalent among Manhattan employers surveyed by Jennings (1951).

Medical directors from nineteen industrial organizations nationwide reported that a major factor in their reluctance to hire workers with cardiac conditions was a concern that physical demands exceeded the capacity of the individual with the disability (Lee et al, 1957). This concern was of particular importance to industries already having employees with cardiovascular disease (approximately 8% in their work force). Jobs with physical stresses appropriate to this disability were filled.

The ability to perform manual labor was a concern of participants in a survey of Los Angeles County employers (Reeder, 1965) with most participating firms unwilling to hire an individual with a cardiac condition for such a position, and only one firm reported actually having done so. Organizations with many heavy manual labor jobs often had a restricted number of positions perceived as suitable for individuals with heart disease.

During a survey of 89 firms in the Minneapolis/St. Paul area, 36 respondents indicated that they had persons in their employ who, to their knowledge, had some type of heart disease (Reeder & Donahue, 1958). Although most firms did not keep adequate records and most of the data were based on the memory of management personnel, all ten of the larger organizations identified workers with cardiac disabilities in their employ. Reeder and Donahue found noticeable differences in the attitudes of management personnel in all types of industry regarding re-employment of workers who developed cardiovascular disease during his/her employment with the company. Initial employment was regarded in economic terms, while re-employment involved a sense of "moral obligation to the worker" (p. 237). Only four of the 89 firms would not continue workers who developed a cardiac condition.

During a survey in southern California where physical limitation was defined as a "reduction in energy", employers were asked to consider the feasibility of modifications to accommodate workers with orthopedic disabilities (Grace, 1970, p. 262), and generally, participants felt that physical limitations outweighed feasibility of modification. In particular, manufacturing and service firms viewed physical limitations as important.

A recent survey (Threlkeld & DeJong, 1982) revealed that hospital supervisors in Massachusetts, New Hampshire, and Vermont

found the physical limitations of individuals with wheelchair confinement, double amputation or cerebral palsy a significant deterrent to employment. Jobs such as bookkeeper, central supply work, file clerk, nutrition aide and public health educator were considered appropriate. Seven of the eight highest ranked jobs for the worker with wheelchair confinement or double amputation were low in required physical demands. The employer's interpretation of the individual's physical capacity was crucial in judging the employability of persons with these three disabling conditions.

Supervision

During the last thirty years, surveys have asked employers to evaluate the supervision needs of workers with disabilities on the general basis of the presence of a disability. Respondents have usually not been asked to specify those activities or responsibilities which may need increased or decreased supervision.

Emotional Handicap. During a survey of 200 Boston employers, Olshansky et al. (1958) found 15% of the respondents expected ex-mental patients to exhibit bizarre behavior, and 30% expressed anxiety about "acting out" (expressed as "fly off the handle," "blow up," and "flare up") (p. 395). When ex-mental patients are viewed as violent, uncontrollable and unpredictable, it is easy to see why employers feel they require close supervision.

Three years later Hartlage (1961, p. 68) found that employers from Louisville also regarded ex-mental patients as "likely to act on impulse, prone to sudden violent action, unpredictable, and more likely to relapse into mental illness." It was their opinion that workers who are ex-mental patients required more supervision.

During the same year, Margolin (1961) studied a Veteran's Administration program where former mental patients were trained, work-conditioned, placed with area employers and provided with extensive follow-up supervision. Some participating employers reported that the former mental patients worked well under structured supervision.

Margolin hypothesized that there was a large reservoir of mental patients who could join the labor force if industry would be willing to provide such structured conditions within the work setting (Margolin, 1961, p. 112).

Margolin acknowledges that some business people may shake their heads at such benevolent attitudes and may regard them as impractical in terms of profit making.

Ten years later, during a survey of Indiana employers in Bloomington and Indianapolis, Hartlage (1971) found that

employers were concerned that former psychiatric patients working in their firms would require more supervision.

Mental Handicap. In 1965, during a survey in the Frankfort, Kentucky area, Hartlage found employers concerned that persons who are mentally retarded would require more supervision. Bolanovich and Rasmussen (1968) canvassed manufacturing firms in the St. Louis area with 100 or more employees. Respondents with unfavorable attitudes toward workers who are mentally retarded cited additional problems involving supervisor time. Respondents in the Bloomington and Indianapolis survey (Hartlage, 1971) reported that, while workers who are mentally retarded were slightly below average in other areas, they needed slightly less supervision than co-workers. In 1972, Williams found that 29% of the Minnesota employers surveyed identified supervisory cost as an extra expense they considered in hiring decisions involving mentally retarded individuals.

Physical Handicap. Eight hundred personnel managers from 47 states and 510 supervisors from Minneapolis/St. Paul disagreed with the statement that a supervisor "must give a handicapped worker more supervision and help than a non-handicapped co-worker" (Schletzer et al, 1961, p. 17). Among Minnesota survey respondents, supervisory cost was identified as an extra expense they considered in hiring decisions (Williams, 1972). Thirty nine percent rated it as an important consideration for applicants who were deaf and 35% rated it as important for applicants who were blind.

General and Unspecified Handicapping Conditions. Surveys have shown that, while some employers may differentiate among types of disabilities when evaluating supervisory requirements, others assume a generalized attitude that equates the worker with a disability with his non-disabled co-worker.

Indiana survey participants did not feel that employees who were amputees required additional supervision (Hartlage, 1971). Minnesota respondents did not consider supervisory cost as a factor in the hiring decision for applicants with epilepsy, diabetes, peptic ulcer, serious heart attack, one arm or one leg (Williams, 1972).

At an Air Force base where 20% of the employees were physically disabled, 83% of the supervisors felt they were comparable to non-disabled co-workers in their observance of the rules and regulations (Simon, 1963).

Work Attendance

Absenteeism

Because work attendance can have an important effect on productivity, surveys have frequently asked employers to evaluate

this aspect in relation to employees with disabilities. Early surveys identified some commonly held erroneous beliefs. For instance, the majority of respondents from New York City believed that a person with a disability would have excessive absenteeism (Jennings, 1951). Twenty-four of the 84 participants in a Boston survey, reported that absenteeism was an important consideration when employing individuals with cardiac conditions (Olshansky et al, 1955).

It is difficult to obtain accurate attendance information because organizational records often do not identify workers with disabilities or indicate when employees were absent. Survey authors have frequently had to rely on the employer's subjective evaluation of attendance record, or their assessment of the possible attendance behavior of hypothetical workers with disabling conditions. For instance, during a nationwide survey of the medical directors for nineteen industrial firms, ten reported that they did not have specific information on absenteeism for employees known to have cardiovascular disease (Lee et al, 1957). Only five of the organizations were able to report that absenteeism in this group was above the plant average while four considered the absenteeism rate comparable to employees without cardiovascular disease. During a survey of public and private employers in northern Israel, only a slight reduction in the level of productivity and promptness was attributed to disabled workers but they were reported to be absent more frequently.

Perhaps the most comprehensive study was prepared by the Bureau of Labor Statistics (1948). This report compared the attendance of 11,028 disabled versus 18,258 non-disabled workers in selected manufacturing industries; workers with disabilities had absentee rates of 3.8% compared with 3.4% for non-disabled workers, amounting to one extra day lost for every 250 working days (Wessman, 1965, p. 16). There were only a few cases of extreme absenteeism in both groups.

During a survey of the 24,473 employees at Consolidated Edison, 54% of the 896 workers with cardiovascular disease had excellent attendance records (Franco, 1954). The absenteeism rate for these employees was approximately 25% below the general average.

When the United States Office of Vocational Rehabilitation surveyed 110 large corporations, 55% rated the absenteeism of workers with disabilities as "better," 40% as "the same," and 5% as "worse" than non-disabled co-workers (Ellner & Bender, 1980, p. 31). Likewise, a survey of 16 major corporations employing 8,000 disabled workers found their absenteeism rate to be noticeably lower (Pati & Adkins, 1980). Du Pont supervisors and foremen who observed 1,452 handicapped workers on the job rated 79% as average or better in attendance (Ellner & Bender, 1980, p. 32). Supervisors at an Air Force base, where 20% of the

employees were physically disabled, reported that attendance for 53% was comparable to that of non-disabled co-workers, 32% were "not so good" and 15% were "better" (Simon, 1963, p. 59).

Some surveys have asked employers to evaluate the work attendance of individuals with specific disabling conditions. Three of the 18 Chicago employers surveyed by Polner (1958) gave absenteeism as the main reason for refusing to hire individuals with cardiac conditions. A survey of 800 personnel managers from 47 states and 510 supervisors from Minneapolis/St. Paul revealed that over 60% agreed that workers with physical disabilities were less likely to abuse sick leave than non-disabled co-workers (Schletzer et al, 1961). Fifty-four percent of the personnel managers agreed that absenteeism rates are usually lower for their employees with disabilities. Frankfort, Kentucky employers found no distinction between the attendance rate of workers who are mentally retarded and their co-workers (Hartlage, 1965). Louisville, Kentucky employers gave the same evaluation of ex-mental patient employees (Hartlage, 1961). While employers in Indianapolis found workers who are retarded to be about average in absenteeism, they reported that workers with psychiatric disabilities were above average, and workers with amputations were slightly below (Hartlage & Roland, 1971). In Atlanta, four of the 15 respondents would not hire workers with disabilities for fear that absenteeism would increase (Eggers, 1960).

When the National Committee for Careers in Medical Technology (1969) asked the directors of hospital laboratories to evaluate lab workers with disabilities, nearly every employer reported that their attendance records were equal, and frequently superior to, those of their non-disabled co-workers.

Recent surveys have indicated that employers continue to be concerned about the attendance of workers with disabilities. In 1980, Mithaug found that absenteeism would definitely affect the decision to hire an individual with a disability for 77% of the 43 participating organizations.

Turnover

A survey of ex-mental patients from a Veterans Administration Hospital in Massachusetts examined the experience of 198 individuals during a five-year period (Margolin, 1961). Eighty-one of these workers had more than one job - the average being three - with one having nine jobs in a four-year period. The number of job changes, 350 in all, reflected considerable instability. Margolin reported that most of the workers continued to experience residual illness, but a follow-up program and "open-door" policy allowed for a return for treatment at any time, and provided support to maintain living in the community.

Several surveys have asked employers to evaluate the turnover of individuals with specific disabling conditions. The

majority of the personnel managers and supervisors in Schletzer et al's (1961) survey felt that turnover rates were lower for workers with physical disabilities than for co-workers. Both groups agreed that workers with disabilities were more likely to remain on the job longer than co-workers. Philadelphia employers with clerical, industrial and service jobs reported that workers with blindness remain in jobs that co-workers would not (Bauman & Yoder, 1965).

Nursing home personnel managers in West Virginia felt turnover was higher for employees with mental retardation (Phelps, 1965). Supervisors at an Air Force base, where 20% of the employees were physically disabled, reported that 62% of the workers with disabilities had better job retention and 35% were comparable (Simon, 1963, p. 59). In four large New York industries, employees with epilepsy showed a stable work record (Udell, 1960). During a survey of hospital laboratories, nearly every employer attested to the fact that the worker with a disability tended to stay on the job (National Committee, 1969).

More recent surveys have found that, while turnover continues to be a concern, employers are more aware of the job retention records of workers with disabilities (Pati & Adkins, 1980). Fifty-eight percent of the 43 companies surveyed by Mithaug (1980) felt that the anticipated turnover rate for workers with disabilities might affect an employer's decision to hire them. When the U.S. Office of Vocational Rehabilitation surveyed 100 large U.S. corporations, 83% of the workers with disabilities were found to have a better turnover rate than their co-workers (cited in Ellner & Bender, 1980). Supervisors of 1,452 workers with disabilities at du Pont rated 93% of them as average or better in job stability (Ellner & Bender, 1980).

Fringe Benefits

Between 1948 and 1958 the United States witnessed a rise in fringe benefit programs, particularly for employees in large organizations (Polner, 1958). The impact of such programs on the future of the average working person has been debated. Industrial physicians focused considerable attention on the effect these benefits would have on the employment of persons with disabilities, especially those with cardiac conditions (Polner, 1958). Some survey respondents viewed company-financed benefits as a problem that would expand as fringe programs were extended throughout industry (Polner, 1958, p. 319). These employers were concerned that liability for compensation would be an important consideration in the employment of individuals with disabilities.

Surveys found employers citing company-financed benefits as a reason for not hiring workers with disabilities. Respondents in an early survey indicated that they wished to avoid workers whose physical impairments might increase the chance of accidents

and the cost of compensation (Noland & Bakke, 1949). Lee et al, (1957) found survey respondents from 19 industrial firms across the country reluctant to employ workers with cardiac problems because of potential costs from compensation claims, sickness, and pension benefits. Hicks and Hicks (1975) found that San Francisco employers from diverse organizations cited company-financed benefits as the cause for not hiring persons with epilepsy.

In the effort to control benefit payments, hiring policies were sometimes apparently developed to exclude individuals with disabilities. Some firms instituted strict physical standards to govern employment decisions. In Los Angeles, 14% of survey participants maintained such standards to avoid hiring workers with cardiac conditions (Reeder, 1965). Polner (1958) found that 18 Chicago firms used selective placement to accommodate workers who developed cardiac conditions during employment, but were unwilling to alter physical standards to permit the employment of applicants with the same disability. While the reasons for not lowering standards for employment were varied, employers' concerns about future costs in benefits were significant with six of the firms, citing it as the main reason for refusing to hire persons with cardiac conditions. However, most respondents in the Schletzer et al (1961) survey did not see their medical departments as being opposed to employing workers with physical disabilities.

Some employers hired disabled individuals if they agreed to waive their company-financed benefits, e.g., one Illinois publisher asked individuals with diabetes, epilepsy, hearing and vision disabilities to sign a waiver of health and sick pay benefits (Harkness, 1971).

Changes in this negative stance toward company-financed benefit programs were not evident in employer surveys until 1960. At that time, only 2% of the 800 personnel managers from 47 states and the 510 supervisors from Minneapolis-St. Paul agreed that expensive fringe benefits prevented their hiring persons with disabilities (Schletzer et al, 1961). Results from an Atlanta survey indicated that attitudes continue to improve. Only one of fifteen survey participants reported that employees with disabilities would "conflict with employee benefit plans currently in place" (Eggers, 1960 p. 431). As company-financed benefit programs became an increasingly integral part of the employment transaction, and as more persons with disabilities entered the workforce, employers became aware of the actual relationship between the two. Their responses became more differentiated, focusing on components of the benefit programs such as insurance, sick leave and workmen's compensation, moving away from a generalized, negative reaction. The following examination of reactions to each of these components provides useful information about changes in employer concerns over time.

Insurance Programs

Employers in early surveys often considered workers with disabilities a heavy burden on their company-sponsored insurance programs. During the 1950's, surveys revealed insurance concerns about workers with cardiac conditions. In 1957, 42% of the respondents from 19 industrial organizations nationwide considered workers with cardiac disabilities to be a burden on insurance programs (Lee et al, 1957). Kline (1954) found that 30% of the company physicians surveyed endorsed the same idea, despite the fact that insurance companies did not regard the inclusion of workers with cardiac conditions with any apparent concern (Kline, 1954, p. 127).

During this time, the cost of insurance seemed to be growing as a deterrent factor in the employment of handicapped persons. As insurance benefits became more widespread and included increasing coverage, employers expressed the concern that workers elect these benefits rather than worker's compensation, especially in borderline situations (Olshansky et al, 1955, p. 509). Insurance liability became an important factor in determining hiring policy toward persons with disabilities. For 42% of the company physicians in Kline's (1954) survey, potential compensation claims from aggravation of pre-existing heart disease was a major obstacle to employment of this group. For 100 Boston area employers, health and sickness liability was third among important factors in determining hiring policy for applicants with cardiac conditions (Olshansky, et al, 1955). Twenty-nine percent of the firms in manufacturing and non-manufacturing groups selected health and sickness liability as one of the three most important factors in the hiring decision.

In Minneapolis-St. Paul, Reeder and Donahue (1958) found that employers could not give accurate estimates of how workers with cardiac conditions increased costs of operation. Thirty-two of the 89 corporations agreed that employment of individuals with cardiac conditions resulted in increased costs, with one frequently cited cost increase being insurance. This was of particular concern to larger firms. Small firms indicated that rate structures were determined on an industry-wide basis, and therefore, did not affect them to any extent.

During the 1960's few employer surveys addressed insurance concerns. From the limited evidence, a gradual change appears to have occurred. Only 4% of the personnel managers and supervisors in the Schletzer et al (1961) survey agreed that health and insurance benefits prevented their hiring persons with disabilities. Likewise, only three of the 15 organizations in Egger's (1960) survey indicated that insurance rates would be raised when individuals with disabilities were hired.

Harkness (1971) set out to determine if the cause of the turndown for employment was the result of the requirements of

health and accident insurance carriers. Analysis of survey results from 280 Illinois employers indicated no identifiable pattern. "While every major insurance firm was named by some respondent, there were several cases of insurance companies being named by a firm that gave an unqualified "no" on all items and the same company serving as the carrier for another firm giving an unqualified "yes"" (Harkness, 1971, p. 53).

When asked if insurance carriers were responsible for the nonhiring of persons with disabilities, a personnel manager for a heavy equipment manufacturer responded; "We do not feel it is sensible or good business practice to let an outside agency such as our insurance carrier determine our hiring and selection policies" (Harkness, 1971, p. 53). Another organization, insured with a different carrier, stated: "(They) exert no pressure nor have any responsibility in the development of employment criteria, which rest entirely with our medical department and high-level management" (Harkness, 1971, p. 53).

During the 1970's a major study examined economic factors underlying the hiring decision for applicants with different types of disabilities. Williams (1972) canvassed 108 Minnesota employers from a variety of industries and found that the cost of both medical insurance and disability income insurance were factors in the hiring process. For applicants with epilepsy, diabetes, and peptic ulcers, medical insurance alone was a "very important" or "important" consideration. However, when the applicant had a back ailment or a serious heart attack, employers considered the cost of both types of insurance. Insurance costs were not a consideration for individuals with one arm or one leg or for those who were deaf, blind, or mentally retarded.

Contemporary surveys indicate that insurance rates may be less of a concern for employers of workers with disabilities (Pati & Adkins, 1980). Mithaug (1980) found that the cost of health and insurance plans did not substantially affect respondents' decisions to hire persons with disabilities. Only 20% of the 43 participants from manufacturing, retail and service organizations reported these factors affecting their hiring decisions. Participants in the AMA survey overwhelmingly agreed that insurance rates are unaffected by having workers with disabilities (Ellner & Bender, 1980).

From the results which are available, it appears that experience with disabled employees and with insurance programs has alleviated some employer concerns.

Sick Leave

In the past, few studies have canvassed employers about the use of sick leave by employees with disabilities. One study conducted by Bressler and Lacy (1980) made an objective examination of the use of sick leave, comparing employees with disabilities

with their co-workers. The records of 808 perceptibly physically disabled civil service employees of the Air Force, located in six locations across the country, were examined.

The subjects were compared with control groups equal in numbers to the disabled population at each location. The study was limited to male Caucasians to increase comparability of the two groups by avoiding the confounding effects of sex and race. The samples were limited to employees with career appointments, thus assuring sufficient employment tenure.

The greatest difference between the groups was sick leave credit: non-disabled workers accrued credit at a greater rate than co-workers with disabilities--largely used by workers with orthopedic disabilities (8.3 vs. 6.2 days per year on the average.)

Although the research results are limited, there is adequate documentation to support the fact that employers have historically been concerned that workers with disabilities would use more sick leave time than their co-workers, thus increasing the cost of sick leave benefits. Equally well documented, however, is evidence that any difference in the use of sick leave is small. It appears that employers can utilize individuals with disabilities with reasonable confidence that their productivity and work attenance will not be adversely affected by excessive use of sick leave time.

Safety and Worker's Compensation

Worker's compensation rates are determined by two factors--a company's accident rate and the hazards of work within the organization. Employers are usually cognizant of this, but some continue to voice concerns about workers with disabilities. Most states have enacted second injury legislation, establishing funds to cover liability. Nevertheless, employers continue to fear that a worker's prior disability added to a work-related injury will create a total and permanent condition for which they will be liable. Although studies of workers with disabilities indicate their safety records are as good or better than fellow workers, employers continue to express concerns about safety and compensation liability. Surveys have found that the relationship among safe work behavior, employees with disabilities, and worker's compensation is not a simple one. Taken separately, each of these factors generates a somewhat different response from employers. The following review will examine each factor in an attempt to determine the reasons for employer concern.

As participants in surveys, employers have provided significant evidence that workers with disabilities are safe. Perhaps the most comprehensive report was prepared by the Bureau of Labor Statistics (1948). This study compared the non-disabling and disabling injury rates of 10,858 workers with disabilities versus

18,001 co-workers in selected manufacturing industries. Both groups had identical records--9.9 injuries per 10,000 hours on the job (Wessman, 1965, p. 16). This substantiated earlier work by Trump and Montgomery (1944) who surveyed 300 industrial firms employing 63,382 workers with disabilities, and found that 51% had fewer injuries than co-workers. In addition, one of the earliest studies available reviewed the work records of 1,304 employees, of whom 652 were disabled. It was found that, over a one year period, the workers with disabilities had 5.6% more accidents (Dietz, 1932).

Udel (1960) examined the performance of workers with epilepsy in four large industrial firms. During 1957, there were no lost-time accidents in three firms and the other firm showed a slightly higher accident rate but no significant lost-time. Simon (1963) surveyed supervisors at an Air Force base where 20% of the employees were physically disabled. Supervisors reported that workers with disabilities were comparable to fellow employees on injury frequency and safe behavior on the job. When the U.S. Office of Vocational Rehabilitation surveyed 100 large corporations, they found that the accident rate of 57% of the employees with disabilities was better than that of their co-workers (Ellner & Bender, 1980).

In only one survey are these positive findings contradicted. Goodyear and Stude (1975) evaluated the results of a program at an Internal Revenue Service Center designed to allow severely disabled individuals to be employed with examination waivers. Although based on small numbers, supervisors reported that the majority of employees with disabilities had average or below accident records, while the majority of their co-workers had above average records.

In spite of evidence about injury frequency and safe behavior on the job, employers are concerned about worker's compensation. In Louisville, Kentucky, 127 employers reported that former mental patient employees compared favorably with other workers in terms of accidents (Hartlage, 1961). When Philips (1975) interviewed 33 New York employers, he found deafness viewed as an occupational hazard. The employability of deaf persons was restricted because of fear of injury on the job. Hicks and Hicks (1975) surveyed 100 large employers in San Francisco in 1956 and again in 1966, finding safety factors most frequently cited as the reason for not employing individuals with epilepsy. The authors cited Risch (1962), who called employer reluctance to hire individuals with epilepsy for safety reasons "a major misconception" (Hicks & Hicks, 1975, p. 147). According to the findings of Gade and Toutges (1983), some reluctance continues. Among 21% of 112 participants from North Dakota, worker safety was most frequently cited for not hiring persons with epilepsy, even though their employees with epilepsy had good safety records.

Worker's compensation has not always been unfavorably

regarded by employers. Prior to its inception, employers were increasingly vulnerable under the old common-law rules of liability (Ashford, 1976). They regularly lost negligence suits and it was in their economic interest to encourage passage of compensation legislation. Early advocates believed this remedy would be an effective and simple way to reduce litigation over industrial injuries (Rosenblum, 1973). Unfortunately, this was not to be the case.

Early laws passed in Maryland and New York were declared unconstitutional on the grounds of deprivation of property without due process of law (Rosenblum, 1973). This opposition by the courts caused legislatures to limit the scope of laws so coverage was fragmentary and elective rather than comprehensive and compulsory. By 1971, when the U.S. Supreme Court held that compulsory compensation laws were constitutional, a pattern had been firmly set. In the words of Abner Brodie, writing in the Wisconsin Law Review (Ashford, 1976, p. 49):

> Even when elective, most acts applied only to specified hazardous industries. None covered all classes of employees. Agricultural workers, domestic help, and casual workers were most commonly excluded. Only a few acts applied to public employment. In general, compensation laws limited indemnity benefits to maximum total amounts, even for permanent disability or death. Cash benefits were usually stated as a percent of wages at the time of injury, 50% being the most common, although a few acts provided for about two-thirds of wages, subject to statutory maximum compensation ranging from $10 weekly in several states up to $15. Several states made no provision at all for medical benefits. Where provided they were limited in duration or amount or both.

Although economic changes and public policy prompted some increase in benefits and in the scope of the law, the basic concept underlying worker's compensation did not undergo any major change until the late 1960's. Prior to this, employers expressed their dissatisfaction with the system because it covered some injuries and diseases they did not consider job-related and was costly, relative to its apparent benefits (Rosenblum, 1973). In addition, one of the provisions specifically designed to facilitate the employment of individuals with disabilities--second injury laws--was negatively regarded. To varying degrees, states established laws protecting employers from the liability created when a pre-existing disability was aggravated by work conditions, occupational diseases, or accidents on the job. All employers participating in the state's compensation program contributed to a fund designed to provide insurance coverage under these conditions. This meant that "individual employers were responsible for no greater liability than if no handicap had existed before employment" (Burr, 1963, p. 56).

However, problems with second injury laws were created because they required the employer to be aware of the worker's original disabling condition. Meeting such requirements was often complicated by applicants who concealed their disability. In addition, early waiting periods were often long--up to two years--discouraging rehabilitation and a return to work (Franco, 1954). Employers were also concerned because worker's compensation boards had deliberated for years without determining whether a causal relationship existed between industrial accidents and certain disabling conditions (Franco, 1954).

For these reasons, employers were concerned about protecting themselves from liability. A sense of potential risk, rather than any past experience, influenced them to avoid hiring applicants with disabilities. Noland and Bakke (1949) found respondents from North Carolina and Conneticut concerned about compensation liability and avoiding applicants whose physical impairments might increase the chance of injury. When asked to rate deterrents to hiring, "proneness to accidents" was rated second. Kline (1954) found that 42% of 101 industrial physicians stressed the monetary loss from compensation claims, based on work conditions that might aggravate pre-existing cardiac disabilities.

Lee et al. (1957) obtained similar results in a survey of medical directors from 19 organizations representing 116,855 employees. During a five year period, only 28 episodes of acute cardio-vascular disease occurred at work, with ten worker's compensation settlements. Despite the low work-related incidence within their organizations, 18 firms reported that compensation liability was important in determining hiring policy.

Reeder and Donahue (1958) interviewed manufacturing, retail, and service employers in the Minneapolis/St. Paul area. Participants regarded disability claims from workers with cardiac conditions as a serious threat under compensation laws, and avoided the problem by not hiring such individuals.

Worker's compensation liability was given as the major consideration in determining policy toward job applicants with cardiac disease by 100 survey participants from the Boston area (Olshansky et al, 1955). The policy of one-fourth of the participants representing one-fifth of the labor force in greater Boston was to exclude persons with cardiac disease. Of those companies without a stated exclusionary policy, approximately two-thirds had not hired any workers with cardiac disease over a six-month period. However, many companies were willing to retain workers who developed cardiac conditions during employment.

Olshansky et al, (1955) examined the claims brought against the participants during a three year period and found only 78 claims for cardiac injury or death in a total labor force of more than 176,000 workers, an average of less than one claim per

employer. While it appeared that cardiac claims for permanent and total disability were neither large nor frequent, death claims were a significant threat discouraging employers from hiring workers with heart disease.

Interestingly, during another survey of Boston employers, Olshansky et al (1958) found that only four of the 140 participants recommended any reduction of liability in the Massachusetts compensation law.

Hart (1962) also interviewed employers from Massachusetts, finding apprehension toward hiring persons with a known heart condition or epilepsy to be great among 1,000 participants across the state, particularly those from large organizations. Both high rates and provisions of the Massachusetts Act were of concern to employers. They believed that fatalities connected with work had increased their compensation rates, and they were concerned about the danger of industrial accidents even on nonhazardous jobs. This supported Cantoni's (1961) findings that 40% of 255 Detroit survey respondents viewed worker's compensation costs as a deterrent to the hiring of individuals with disabilities.

Polner (1958) reviewed the worker's compensation cases allegedly caused by cardiovascular conditions in 18 Chicago area firms over a five year period. He found that most of the companies had not had extensive experience with claims due to cardiac disability--in approximately 1,000,000 years or 2.08 billion hours of work, less than 100 cases had been filed (Polner, 1958). Reeder (1965) also found worker's compensation costs frequently cited as a limiting factor in the hiring of persons with cardiac disabilities.

A majority of the participants in the Schletzer et al, (1961) survey felt that workers with physical disabilities did not have higher accident rates. They disagreed that the cost of worker's compensation would increase simply because individuals with disabilities were hired. However, the survey found that participants were relatively uninformed about their state compensation laws, particularly second injury provisions.

Other surveys did not find worker's compensation liability to be a deterrent to employers of workers with disabilities. When the Federation Employment and Guidance Service (1959) canvassed personnel officers from New York City, they found that less than one in ten were discouraged by worker's compensation costs. Many of the respondents were unaware of second injury provisions.

Authors of early surveys emphasized that worker's compensation rates could be mitigated by good safety and medical programs (Polner, 1958; Franco, 1954). In fact, the National Council for Industrial Safety, now called the National Safety Council, was initiated in 1912 by the Association of Iron and

Steel Electrical Engineers at a convention in Milwaukee, because they felt one of the best ways to reduce compensation costs would be to reduce the number of accidents (Rosenblum, 1973).

During his survey of the Consolidated Edison Company of New York, Franco found the following evidence that an adequate medical service could do much to reduce the liability factor with employees who had cardiac disabilities (Franco, 1954, p. 319):

> Over the past seven years, we have had only seven claims in which an acute coronary attack was believed traceable to strain or to a direct injury to the frontal chest. Five of these were accepted by the Workmen's Compensation Board and in four of the five, the causal relationship was first noted by our own Medical Department.

Based on the experience at Consolidated Edison, Franco stressed the importance of pre-employment examinations to collect information about the original disabling condition as required under second injury laws. Routine electrocardiograms, particularly for males over forty, might detect conditions that justified physical restrictions. Because job recommendations depend largely on the specific detail that accompanies them, Franco (1954) suggested that physicians rely on work classifications corresponding to standards established by the American Heart Association.

These early surveys revealed that employers had a continuing concern for the occupational health and safety of workers with disabilities. Between 1961 and 1970 this concern intensified as the industrial accident rate rose nearly 29%. In 1976 the National Safety Council estimated that 14,000 deaths due to accidents on the job and 2.2 million disabling injuries occurred annually (Ashford, 1976, p. 46). Increased environmental and health consciousness on the part of the public thrust the issue of job health and safety into the forefront of debate and legislative activity.

Williams (1972) canvassed 108 Minnesota employers to determine their attitudes toward hiring persons for sales, production, management and clerical jobs. He found that 25% of the employers did consider worker's compensation rates to be an extra cost in hiring a person with a back ailment, serious heart attack (37%), epilepsy (32%), blindness (30%), deafness (27%), or peptic ulcer (25%).

When employers surveyed by Emener and McHargue (1978) were asked to respond to the following: "When considering hiring a disabled worker, I want to know the following information regarding the disability", 86% of the 57 participants replied, "Will their disability cause hazards or lawsuits?" Mithaug (1980) found that 59% of the participants from Fortune 500 com-

panies regarded liability for injury on the job as an important factor affecting their decision to hire handicapped individuals.

In contrast, when Holmes and McWilliams (1981) asked 116 factory and product-oriented employers from Tennessee if hiring an individual with a history of epileptic seizures would increase compensation rates, 50% were unsure, 41% said no, and 9% said yes. The authors cited Eliers et al (1967) and the Epilepsy Foundation of America Publication (1972) in their conclusion that "Employees with epilepsy are eligible for the same participation under workmen's compensation programs as non-epileptic employees, and many employers are aware that hiring them will not increase their premiums; however, it is a convenient excuse for not hiring" (Holmes & McWilliams, 1981, p. 20).

Holmes and McWilliams (1981, p. 21) also asked survey participants "If an applicant provided medical information verifying a disabling condition such as epilepsy, would you hire that person on a waiver?" A waiver of compensation rights is not an option because every state's compensation law requires that coverage be provided for all employees. Coverage cannot be waived by a worker to enhance his/her employability. Apparently some confusion or lack of information existed among respondents because 47% answered "yes" to the question and 44% were unsure.

Internal studies by major industrial firms confirm survey statistics. When du Pont supervisors rated job safety for workers with disabilities, 96% were found to be average or better (Wolfe, 1974). The study also reported there were no lost-time injuries and no increase in compensation costs. These findings substantiated a survey by the U.S. Chamber of Commerce and the National Association of Manufacturers (Ellner & Bender, 1980). More recently, Fuqua, Rathbun and Gade (1984) surveyed 50 employers in one state, representing a wide range of area businesses. When asked to identify work problem areas, accident rate and worker's compensation problems were exceeded only by concerns about productivity.

According to these results, employers have many of the same concerns and attitudes about the safety of workers with disabilities that they had prior to the enactment of OSHA in 1970. The majority of participants in the Department of Labor (1982) survey felt that providing accommodations for a handicapped worker improved his/her safety on the job. This was particularly important in large manufacturing and service firms.

Recent surveys continue to show that employers have great concern about accident rates and worker's compensation (Fuqua et al, 1984). There are, however, differences in employer attitudes toward specific types of disabled workers. While accident and worker's compensation rates would be major considerations in employing workers who were blind or cerebral palsied, they would be of less concern when hiring those with epilepsy or emotional problems (Fuqua et al, 1984).

In summary, this review has shown that the protection offered by worker's compensation may in some instances impede the disabled worker in obtaining a job. According to Burr (1963, p. 57), "appeals to employers to hire handicapped individuals and to overlook the excess costs such action imposes on their company" conflicts with a basic characteristic of the competitive enterprise system--the drive for financial efficiency. When increased compensation costs must be absorbed by the firm, lowered profits quickly cause concern. Rehabilitation professionals should remember that in a competitive economy the incentive for business to assume these excess compensation costs occurs only when enduring them is the most efficient way to maintain or expand profitable operations."

Work Force Integration

One of the employer's primary considerations is the new employee's ability to integrate successfully into the work force. Typically, integration involves social interaction with different types of workers from management personnel and line supervisors to co-workers. Sociability also involves aspects of personal adjustment and appearance, including grooming and "offensive" physical characteristics, which directly influence the ability to integrate.

This section represents an effort to examine work force integration from all three perspectives: sociability, personal adjustment, and appearance. Sociability is addressed in terms of co-worker and supervisory relationships, while personal adjustment is operationally defined to include both personal emotional adjustment and appearance.

Co-Worker and Supervisory Relationships

A number of surveys attempt to determine the reaction of co-workers and supervisors to the employment of workers with specific disabling conditions. Surveys that focus on specific disabilities will be reviewed as a group. Those few that address disability in a general sense without mention of a specific impairment will be reviewed separately.

Emotional Handicap. Olshansky et al (1958) found that many of the 200 employers in their survey of the Boston area were concerned about disclosing an employee's history of mental illness. More than 75% would not reveal that a worker was an ex-mental patient even though the majority were concerned about the reoccurence of symptoms and indicated that close supervision would be required. The majority regarded it as a private matter--telling would be a breach of confidence. Employers felt it might upset co-workers who could become overly sympathetic or cruel. Confidentiality and cruelty were the most frequently mentioned concerns.

In a survey of the Los Angeles area focusing primarily on small business employers, Salzberg, et al (1961) utilized a structured interview with personnel officers, owners and foremen from 78 businesses. These employers were very concerned about interpersonal relationships between their current employees and ex-mental patients. Forty-two percent felt that their employees would discriminate against the emotionally disabled.

During that same year, Margolin (1961) surveyed employers in Brocton, Massachusetts, who had ex-mental patients on their payroll. When asked to identify strengths and weaknesses of these workers, participants did not mention co-workers' relationships directly. They did stress that a structured supervisory situation was necessary in order for employees, particularly those who were withdrawn or experiencing anxiety, to work well within their organizations. The researchers found that some participants were willing to provide the structured supervision and actually adopted the process as a challenge, deriving satisfaction from meeting a community service need. They concluded that many more ex-mental patients could be accommodated within the labor force if employers in general would be willing to provide such structured supervision.

When Hartlage (1961) surveyed 127 Louisville, Kentucky, employers, he found that the majority felt there was little difference between an ex-mental patient's ability to get along well with co-workers and that of an employee who had never had mental illness. However, participants in this survey did feel that ex-mental patients would require more supervision.

Farina, Felner and Boudreau (1972) conducted a study in which employers were asked to respond to applicants who were presented as having a history of mental illness. In actuality the applicants were not disabled and during the interview they behaved normally. Interestingly, the employers found these individuals to be less likely to get along with fellow workers. The researchers concluded that individuals with a history of psychiatric disability would probably encounter difficulty with co-workers if their history was disclosed.

In summary, these surveys over the period between 1958 and 1972 indicated that employers were very much concerned about the ability of employees with emotional disabilities to interact successfully with other workers, particularly co-workers. A number of survey participants felt that structure and supervision are required if integration is to be successful for these individuals.

Mental Handicap. Cohen's (1963) study of New Jersey employers with mentally retarded workers on their payrolls revealed some interesting findings about the willingness of employers to report actual circumstances surrounding the employment of handicapped workers. Records indicated that a group of dissatisfied employers were present in the area, as

evidenced by terminations of workers who are mentally retarded and refusals to hire additional referrals. Although the records did not reveal the incidence of problems, they did indicate that personality clashes between employers and co-workers, pilfering, and unacceptable work performance were the primary reasons for dissatisfaction. The data from the study, however, were not in agreement with the incidence of problems cited in the records. The employers, relatively well-informed about mental retardation, apparently did not want to reflect negatively on the workers.

The Frankfort, Kentucky, employers surveyed by Hartlage (1965) felt that persons who are mentally retarded would be particularly deficient in their ability to adjust to new situations and would require additional supervision. Employers surveyed by Bolanovich and Rasmussen (1968) were also concerned that these workers would require more supervisory time.

Greenspan and Schoultz (1981) specifically addressed sociability in their research regarding the reasons for termination of 30 mildly and moderately retarded workers. They found that social incompetence played as important a role in job failure as nonsocial reasons. Problems stemmed from inept rather than antisocial or emotionally disturbed behavior. Seventeen of the 30 workers lost their jobs because their limited social awareness resulted in a lack of understanding about people and work settings--conversations were inappropriate and excessive (e.g., mentally retarded workers in nursing homes were inappropriately inquisitive about patients).

When Smith (1981) surveyed 71 employers from a metropolitan area in the South he found a characteristic, major concern that persons who are mentally retarded would not exhibit appropriate social behavior or relate well to other employees.

In summary, these surveys over the 18 year period between 1963 and 1981 indicate that employers have the same general concerns about mentally retarded workers they have about those with emotional disabilities.

Physical Handicap. Two surveys canvassed employers about their concerns for employees who were blind or visually impaired. In 1965, Bauman and Yoder found that 79% of the 236 Philadelphia employers of blind workers reported that co-worker relationships were no problem. While there were some reports of personality problems and overprotection, 8% reported there was actually a boost in morale.

Phillips' (1975) survey of 33 employers in the Rochester, New York, area canvassed organizations on the employability of persons who were deaf and hearing impaired. The participants were divided in their feelings and experiences regarding the social interaction of workers with deafness. About as many anticipated problems as did not; however, responses indicated that the matter was of considerable concern to a number of employers.

Although no survey specifically canvassed employers about their concerns for workers with epilepsy, Hart (1962) reported that 1,000 employers throughout Massachusetts were concerned about the disruption among co-workers if a seizure occurred.

General or Unspecified Handicaps. During a survey of 20 New York employers, Jennings (1951) found that a majority were concerned about accepting employees with disabilities on an equal basis with non-disabled workers. They expressed concern that excessive sympathy for the individual would prevent co-workers from accepting and treating the person as a "normal" employee. Strained relationships, marked by lower expectations of performance, were thought to cause resentment on the part of fellow workers.

Eggers (1960) surveyed 15 Atlanta industrial concerns and found that three companies would not hire a person with a disability because of resistance from fellow employees. Another felt there would be resistance by the public, and another reported that the employment of persons with disabilities would have an adverse effect on morale. Eight of the 15, however, felt that employment would have a positive effect on morale. Two of these actually assigned non-disabled employees to orient new workers with disabilities to work surroundings, while a third company used this approach on occasion.

During a survey of 800 personnel managers from 47 states and 510 supervisors from Minneapolis-St. Paul, Schletzer et al (1961) asked questions involving teamwork, co-worker respect, loyalty and cooperativeness, ability to supervise, customer reactions, making co-workers uncomfortable, and morale. For both groups, unfavorable responses for each area were never more than 10% and usually were less than 5%. Respondents were also asked to compare workers with disabilities with non-disabled co-workers on measures of supervision with the following results: following instructions (34% supervisors, 46% personnel managers); more help from the supervisor (16% supervisors, 11% personnel managers). Results from both parts of this study indicate that the participants were more concerned with supervision than with co-worker relationships.

When Hartlage and Taraba (1971) surveyed employers in Bloomington, Indiana, they found that the respondents did differentiate among individuals with mental retardation, epilepsy and a history of juvenile delinquency, in terms of the need for supervision, expected trouble adjusting to new work settings, and getting along with co-workers. Results indicated that employers expected that more supervision would be required for former psychiatric patients and were concerned about their ability to adjust to new work situations. Overall, participants were most receptive to persons who are mentally retarded, followed by those with epilepsy and juvenile delinquency.

In Indianapolis, Hartlage and Roland (1971) also found that employers did not perceive persons with disabilities as an undifferentiated group. The participants from this city expected more co-worker relationship problems for former psychiatric patients than for persons who were retarded or had amputations. They perceived workers with both psychiatric disabilities and mental retardation as requiring greater supervision. This was a particular concern for individuals with mental retardation.

Williams (1972) interviewed 108 Minnesota employers and found that increased supervisory costs were not anticipated for workers with most disabling conditions. However, for the following severe disabilities increased cost was anticipated in the percentages indicated: blindness--45%, deafness--45%, mental retardation--63%.

Lyth (1973) studied English employers' attitudes and found that successful workers with disabilities were also well liked by their collegues, supervisors, and other good workers. However, the least successful employees had poor relations with other workers. These results suggest that job performance capability has an effect on the overall attractiveness of the disabled worker. It also suggests that problems of discomfort may be overcome by successful job performance.

Goodyear and Stude (1975) conducted a study in which Internal Revenue Service supervisors compared workers with disabilities to non-disabled co-workers on a number of variables including relationships with co-workers and supervisors. There were no significant differences between the two groups on this variable.

Mithaug (1980) surveyed 43 Fortune 500 companies to determine the factors of most concern in employers' decisions to hire applicants with disabilities. On a rating scale from "not affect" to "definitely affect", he found that approval of supervisors and co-workers was at a point midway between "not affect" and "maybe affect" while the approval of customers had a very limited effect on the decision making process. More recently, Fuqua et al (1984) found that relationships with co-workers created the least concern for employers who were asked to evaluate work problems in twelve areas. However, participants in this survey did discriminate in their attitudes toward different disability groups. The ability to handle new work situations was a strong concern in the employment of individuals who are mentally retarded and those who are paraplegic.

Although not directly related to the relationships among disabled persons and their fellow workers, the DOL study on job accommodations provides some information on the effects of such accommodations on co-workers (Berkeley Planning Associates, 1982). The report indicates that 19% of the 367 respondents found that accommodations caused fellow workers to suffer some

inconvenience while 3% reported that they actually made the co-worker's job harder.

Personal Adjustment

One of the factors which influences the overall assessment an employer makes of a prospective employee is the applicant's apparent level of personal adjustment. Employers look for factors such as appearance, self-expression, and the ability to explain work experience as indications of how well-adjusted an applicant is. The level of adjustment has been a long-standing factor of importance to employers and rehabilitation practitioners alike. The rehabilitation literature has focused on personal problems of a continuing nature which involve behavior or appearance. For employers, personal adjustment problems involve any behavior considered detrimental to the performance of work.

Studies focusing on personal adjustment are numerous. Those that focus on specific disabling conditions will be reviewed as a group while those which address disability in a general sense will be reviewed separately.

Emotional Handicap. In their survey of 200 Boston employers, Olshansky et al (1958) found concern about an ex-mental patient's tolerance threshold for pressure and speed, incompatibility with other employees, general acting out behavior, and bizarre behavior. Fifty percent of the participants were concerned about potential violence to self or others as well as a possible recurrence of illness.

When Hartlage (1961) studied 127 Louisville, Kentucky, employers regarding their acceptance of potential employees who had been hospitalized for mental illness, he found the majority felt such applicants were "more likely to act on impulse, be prone to sudden violent action, be unable to tolerate pressure, more likely to become mentally ill, have more trouble adjusting to new situations, require more supervision, be unpredictable, and generally be a worse employment risk" (Hartlage, 1961, p. 59-60). The most acute concern was the fear that former psychiatric patients would be unable to tolerate pressure.

Margolin (1961), in reporting on a follow-up contact with employers of ex-mental patients served by a Veterans Administration Hospital, found concern about continuing personal adjustment problems. Those employers who provided structured supervisory assistance had a greater degree of success with workers who continued to exhibit residual emotional problems. Margolin concluded that employment of individuals with this disability might be increased if supportive and structured supervision were available to intervene in continuing personal adjustment problems.

Bervin and Driscoll (1981) conducted a study using personnel administration graduate students who were preparing for careers

in business and industry. The subjects were shown videotaped employment interviews where the variable was a history of psychiatric illness for certain applicants. Using an adjective checklist instrument, the subjects evaluated the applicants on 13 variables. Analysis revealed that the subjects felt that past psychiatric problems would affect work, particularly attendance and the ability to handle responsibility and pressure. The implications of this study for the job applicant with a history of mental illness are significant. It provides evidence of the employers' tendency to infer future behavior from past history rather than from behavior exhibited by the applicant during the interview. This is particularly true when the disability is one whose major characteristic involves personal adjustment. Practitioners may appropriately provide employers with evidence that a past illness will not necesarily create problems in future work performance.

Mental Handicap. Phelps (1965) surveyed West Virginia personnel managers from service industries such as hospitals, hotels, motels, restaurants, laundry and dry cleaning establishments. The nursing home personnel managers were the most reluctant to hire workers who are mentally retarded because they felt their clientele would object. In addition, they felt workers who are mentally retarded would be overly sensitive about what others say about them. In general, all six groups felt that workers who are mentally retarded would have a lot of emotional problems.

Frankfort, Kentucky, employers surveyed by Hartlage (1965) felt that mentally retarded workers would be particularly deficient in ability to adjust to new situations.

General or Unspecified Handicaps. During a survey of supervisors of civilian employees at an Air Force base, Simon (1963) was able to obtain ratings based on actual experience since approximately 20% of the base employees were physically disabled. The rating on sociability focused on attitude and revealed that only 19% of the supervisors felt workers with disabilities had attitudes which were not as satisfactory as their co-workers. Only a few reportedly took the attitude that the "world owed them a living" and that they could not be terminated regardless of their job performance (Simon, 1963, p. 60).

Dawis and Lofquist (1969) reported on a survey of 239 Minnesota employers' satisfactoriness ratings of former VR clients. As a group, the overall average on the personal adjustment factor was lower for the VR clients (64.8) than for co-workers (72.3). During a survey of 134 Indianapolis and Bloomington, Indiana, employers, Hartlage, Roland and Taraba (1971) asked participants to rate the problems they expected on seven types of work-related behaviors from people with a history of juvenile delinquency, epilepsy, psychiatric hospitalization, mental retardation and major amputations. When asked to rate "trouble adjusting" in comparison with non-disabled co-workers,

the means for each group were as follows: psychiatric - 4.46; delinquency - 3.41; epilepsy - 3.18; retardation - 3.12; and amputation - 3.03. Such results indicate that employers perceive a difference among disability groups in the ability to adjust, with the psychiatric group experiencing the greatest difficulty.

In their study of Work Incentive Program (WIN) placements, Hamilton and Roessner (1972) found that employers were conscious of personal adjustment levels among their workers. This survey included 280 employers nationwide representing manufacturing, transportation, nursing homes, schools, and hospitals, all with at least one WIN graduate on their payrolls. It is important to note the differential manner in which employers responded to social and behavioral problems. They reported the following reservations in the percentages indicated: record of alcoholism, 56%; record of drug abuse, 73%; language problem, 46%; wage garnishment, 56%; arrest record 52%; prison record, 53%; and health problems, 65%.

When Emener and McHargue (1978) asked Florida employers if they were concerned about the emotional stability of potential employees, only four of the 57 respondents indicated concern. Mithaug (1980) also found only moderate concern about the emotional problems and personalities of workers with disabilities. During a survey of 43 Fortune 500 companies, he found emotional factors were rated below five other concerns: the ability to perform a job, productivity, compliance with affirmative action, absenteeism and positive public relations. These findings were substantiated by Roessler and Bolton (1984) during their survey of 38 Arkansas employers with former VR clients on their payrolls. In general, participants viewed their employees no differently than the average employer views workers in general. This sample was at the 45 percentile when compared with workers in general.

Personal Appearance

While studies focusing on personal appearance are few in number, they are consistent in their results. Many reflect the general concern employers have that workers dress and maintain grooming in keeping with the remainder of the work force. Others voice specific concerns about mannerisms and physical anomalies which are associated with some disabling conditions.

Mental Handicap. When Phelps (1965) surveyed personnel managers from service industries in West Virginia, he found that the majority felt the physical appearance of persons who are mentally retarded would bother most customers. Nursing home personnel managers were the most reluctant to hire because they felt the physical appearance of workers who are mentally retarded would be unacceptable to their clientele. During his survey of southern, metropolitan employers, Smith (1981) found that "having a well-kept appearance" was a major concern when individuals who are mentally retarded were viewed as potential employees.

General or Unspecified Handicaps. Schletzer et al (1961) reported on the hiring attitudes of 306 first-line supervisors and 594 personnel managers from Minnesota. While most items focusing on personal characteristics evoked positive responses, much emphasis was placed on good appearance and health. Hamilton and Roessner (1972) found that 75% of the employers of WIN graduates felt that a good personal appearance was required.

Ayer (1968) found that deviations from normal appearance were generally unacceptable to the 58 teachers surveyed during their summer program at a midwestern university. Concerns about facial disfigurement and unusual dress involved the image of the teacher rather than the ability to perform teaching functions. When Ayer (1970) replicated this study with 322 school administrators, she found similar concerns although the younger administrators were more accepting of facial disfigurement.

Threlkeld and DeJong (1982) surveyed 63 rehabilitation counselors and health professionals from ten hospitals throughout Massachusetts, New Hampshire and Vermont to determine their willingness to accept persons with disabilities in various health occupations. The authors found that the physical demands of health care jobs were of more concern than any offensiveness to the public created by anomalies in physical appearance, with one exception. Participants believed that the communication difficulties and facial distortions exhibited by some persons with cerebral palsy would make patients and hospital co-workers uncomfortable.

Summary

A review of the maintenance of individuals with disabilities in the work force involves a number of issues. Employers expressed concern about productivity, flexibility, stamina and endurance, supervision and monitoring, work attendance, fringe benefits, and work force integration. In examining productivity, the considerable problems in assessing quality and quantity of performance were identified. A significant amount of discussion was devoted to these issues since these have a major effect on the results reported in the studies. A presentation of the most pressing and substantive evidence of the performance of workers with disabilities was provided. Studies in which employers had direct experience with workers with disabilities support their continuing record of quality performance. This information indicates that these workers present an excellent overall record of performance, particularly when quality and quantity of work are considered across a spectrum of employment settings and work activities.

Employers express concern about possible problems with the flexibility of employees with disabilities. This appears to be more of a problem with smaller employers, where shifting from position to position may be necessary as the work changes or as

other employees are absent from work. The role of job accommodations is important in providing the flexibility which some workers with disabilities may otherwise lack. Recent research evidence indicates that employers value accommodations which might permit such flexibility in terms of meeting current work demands, and also in terms of promotability for the future.

Employers have been surveyed regarding their concerns about the stamina and work tolerance of persons with disabilities. As might be expected, job pressures and requirements within their company affected the responses of employers. Generally, there was concern about the effect of physical stresses on disabilities such as cardiac disorders and interpersonal stresses on workers with psychiatric disabilities or mental retardation. Employers are also concerned about the effects work pressure might have on disabled persons in relation to potential problems with worker's compensation and insurance benefit programs. In general, employers are willing to consider jobs where physical stamina and prowess are less important, e.g., sedentary work in clerical occupations.

Concerns regarding supervision fall primarly into the same areas, as might be expected. Employers expect individuals with psychiatric disabilities and mental retardation to have more problems, which in turn require additional or more structured supervision. In the case of most physical disabilities, however, employers did not expect any greater demands on supervisors.

Absenteeism is a variable which has repeatedly been cited by employers. The early surveys reviewed in this chapter indicated that this was indeed a problem, not from the perspective of actual higher absenteeism on the part of workers with disabilities, but because employers perceived absenteeism to be a problem. However, more recent surveys refuted the argument, and additional studies assessing the perceptions of employers seem to dispel this concern. It seems likely that employers will be concerned if a chronic health condition is involved where periodic absences will be required for health care. However, across disabilities, employers appear to treat absenteeism as a minor problem.

Turnover is another factor of work attendance which was reviewed. Follow-up studies report that ex-mental patients experience considerable job changes. With other disabilities, the evidence regarding turnover was basically positive with a number of employers stating that workers with disabilities are actually more likely to remain on a job. Although this is often attributed to the difficulty employers see in workers with disabilities being able to change jobs readily, employers have a positive perception of the loyalty and stability of employment on the part of workers who are disabled.

Fringe benefits are another area of concern. Studies

revealed that benefits were a major concern to employers prior to the 1960's. Although later studies revealed less concern regarding benefits as factors inhibiting the hiring of persons with disabilities, employers were still troubled about costs and recognized that some types of conditions (e.g., chronic health problems) could generate extra costs because of the nature of the continuing treatment required. Even though some types of disabilities, e.g., cardiac, have been shown not to be an added cost burden, employers continue to be concerned about these chronic conditions.

Although few surveys reported on the use of sick leave or accident rate, a large scale study which examined these factors did not find any differences of consequence between disabled and non-disabled employees. With the advent of second injury legislation, concerns about disabled workers who sustain second injuries resulting in more severe disabilities should have been alleviated. However, surveys indicate that employers continue to have reservations in this area. Although major studies provide evidence of safety records, indicating there is little cause for concern, employers in one very recent study found accident rate and worker's compensation liability second only to productivity as concerns for applicants with disabilities. Ironically, in some respects the provision of worker's compensation to provide for disabilities incurred on the job has hindered the employment of workers with disabilities. Employer resistance continues, although it is not as pronounced as during earlier periods. While employers do not lump all disabilities into the same category as they have in the past, concern about workers with chronic health problems and the effects these problems will have on costs continues. Overall, the costs of benefits are a major concern to employers.

There is a continuing need for education to assist employers in overcoming their concerns. Also, there is a need for research to currently document the costs generated to employers, if any, when they hire employees with existing health problems. This information may be available through insurance company records and should be shared with employers to overcome their concerns.

An analysis of surveys focusing on relationships between mentally or emotionally disabled employees and their co-workers indicates that employers are concerned about both the disabled and the non-disabled worker's ability to relate effectively to one another. The literature involved in this review spans a number of years and represents isolated studies which make generalization difficult. Four studies revealed employers to be concerned about problems between co-workers and emotionally disabled employees (Farina et al, 1972; Hartlage & Taraba, 1971; Olshansky et al, 1958; Salzberg, et al, 1961). Four studies indicated concerns regarding co-workers and employees with mental retardation (Cohen, 1963; Greenspan & Shoultz, 1980; Hartlage & Roland, 1971; Smith, 1981). Only one study on disabilities in

general revealed such concerns (Lyth, 1973), while four studies revealed no major concerns (Berkeley Planning Associates, 1982; Goodyear & Stude, 1975; Mithaug, 1980; Schletzer et al, 1961). The results from studies on physical disabilities were mixed, with two studies indicating potential problems (Hart, 1962; Wacker, 1976) and three studies indicating no problems (Bauman & Yoder, 1965; Hartlage & Roland, 1971; Philips, 1975).

The trend seems to be a continuing concern about co-worker relationships, particularly when mental and emotional disabilities are involved. This is not unexpected, for many perceive the basic problem in mental illness to involve relationships while mental retardation is often characterized by stereotypes of social ineptitude and naivete.

This continuing concern for relationships between workers with disabilities and their co-workers warrants the provision of information to employers regarding the abilities of rehabilitants to engage in normal social relationships and observe social customs. The placement specialist should be prepared to report on the social competencies of specific individuals to relieve any concerns employers may have, and deal with continuing problems should they occur. In general, the literature supports the common sense conclusion that employers do not like to bring anyone into the workforce who may be disruptive with co-workers.

An analysis of surveys on the working relationships of employees with disabilities with their supervisors revealed concerns about social interaction as well as the need to take additional time to provide supervision and support. In 14 of the 16 studies reviewed, employers expressed concern about supervisory relationships. All four of the studies on emotional disabilities reported concerns (Hartlage, 1963; Hartlage & Roland, 1971; Hartlage & Taraba, 1971; Margolin, 1961). This was also the case in studies of individuals who are mentally retarded (Bolanovich & Rasmussen, 1968; Hartlage, 1965; Hartlage & Roland, 1971; Williams, 1972). Surveys involving general disabilities also reported problems (Eggers, 1960; Jennings, 1951; Lyth, 1973; Schletzer et al, 1961). In surveys of physical disability, employers canvassed by Williams (1972) reported concerns for both blindness and deafness while those surveyed by Hartlage and Roland (1971) and Goodyear and Stude (1975) did not reveal any concern in this area.

The picture which develops in analyzing these studies is one of isolated and limited investigations into supervisory relationships and workers with disabilities. No comprehensive study is available; however, the trend is primarily one of employer concern about the abilities of supervisors to monitor workers with disabilities and the extra time anticipated to provide supervision.

A majority of surveys reported that employers are more con-

cerned about the additional burden placed on supervisors than on the co-workers. The fact that supervisors are fewer in number and often are promoted because of their good work records may account for this. They are considered valuable and difficult to replace. Since they are more costly to the employer, the additional time required for supervision increases the cost to the employer.

The implications for rehabilitation placement practitioners are obvious--it is necessary to present information to employers indicating that most persons with disabilities will not create difficulties for supervisors, either in terms of relationships or time needed for supervision. In addition, the literature reveals the need to carefully identify any potential problems individual applicants may have relating to supervision prior to placement.

Although additional time requirements are important, they are outweighed by the employers' concern for the quality of the relationship between the supervisor and the worker with a disability. Placement personnel need to convince employers of their clients' ability to relate to supervisors effectively without consuming excessive supervisory time. When specific clients are known to have relationship problems, the placement specialist should be prepared to clarify these for the employer in conjunction with practical information about compensatory measures and an overview of the individual's positive work attributes.

Although the results are mixed, it appears that employers are concerned about personal adjustment. Thirteen studies concerning emotional adjustment or instability were reviewed, 11 of which indicated concern for an array of problems from the inability to handle emotions to immature or childish behavior. The four surveys that focused on emotional disability all reported concerns (Bervin & Driscoll, 1981; Hartlage, 1961; Margolin, 1961; Olshansky et al, 1958). This was also true for the two surveys dealing with mental disability (Hartlage, 1965; Phelps, 1965). Four of the seven studies on general disability indicated concerns (Dawis & Lofquist, 1969; Hamilton & Roessner, 1972; Mithaug, 1980; Simon, 1963).

These concerns may occur because employers recognize differences across types of disabilities. There is enough evidence in this area to caution placement specialists to present positive information to employers regarding the ability of workers with disabilities to maintain emotional stability. In cases where there may be residual difficulty, e.g., the chronically mentally ill person with work potential, the placement specialist will need to work closely with the employer to identify and assist in providing support services as needed.

It appears that, while employers do express concerns about appearance, the extent to which this is expressed in the literature is small when compared to other aspects of work force

integration such as personal adjustment and co-worker relationships. Because few surveys have focused on the various aspects of personal appearance--mannerisms, physical anomalies, grooming and dress--it is difficult to determine if the survey data accurately reflect the concerns of employers.

Career Advancement

The research literature contains very little relevant information on the career development of workers with disabilities from the perspective of employers. A literature search conducted on computer data systems such as ERIC revealed few studies concerned with career development and persons with disabilities. Therefore, our ability to report on employer concerns about the overall career patterns or the maintenance of persons with disabilities in the work force is limited.

There is, however, great emphasis on the career development of workers with disabilities in the counseling and the vocational education literature. Most of this information deals with the development and provision of services to this population as they enter the workforce and maintain employment. For example, Dunn (1974) advocates that suitability of placement for rehabilitation closures should include (1) potential of the job for upgrading and advancement within a reasonable time; and (2) the wage should be sufficient to enable the person and his/her family to maintain an adequate standard of living. Vandergoot, Jacobsen and Worrall (1979) advocate follow-up with employers to assure their satisfaction with the employee and also to work with them on career advancement opportunities.

Dunn (1979) indicates that the work establishment of persons with disabilities has not been specifically studied (the work establishment period usually covers the first 3 to 5 years of work life). This was confirmed by Bressler and Lacy (1980) and by the findings of this review. It was possible to identify only one study which provided information on the long term progression of workers with disabilities within an organization. This study is reviewed in some detail although generalizability may be constrained by the fact that the organization was the United States Air Force.

One Significant Study

Bressler and Lacy (1980) reported on a study of civilian employees of the Air Force which employed 86,000 civilians at that time, 8,000 of whom were disabled. The Air Force had a record of exemplary employment of workers with disabilities and no formal grievances, where disability was a factor, had been filed during the five year period prior to the study. As Bressler and Lacy reported, no significant research was found dealing with the work performance of employees with physical disabilities over a span of years and jobs, particularly in comparison with non-disabled co-workers.

The study involved a review of the following measures: (1) promotion rate, (2) performance rating, (3) salary attained, (4) awards rate, (5) suggestions-approved rate, (6) formal education

self-advancement rate, (7) sick leave rate, and (8) tenure. The research was limited to physical disabilities that were evident or perceptible to other persons on a continuing basis and represented orthopedic, visual and/or audiological and/or speech disabilities. The subjects were career status civil service employees located in six sites around the United States. In order to assure homogeneity of samples to match on similar variables, with disability being the different factor, the sample was limited to male Caucasians and to employees with Federal civil service career appointments requiring a three year probationary period. The non-disabled group had a slightly higher level of education. The samples used were 808 perceptibly physically disabled and 808 non-disabled employees, stratified by location and randomly selected. The two groups were relatively equivalent on important variables such as age and tenure on the job.

The findings indicated that the non-disabled group averaged slightly more promotions, had slightly higher supervisory ratings, substantially more salary and a higher award rate. The disabled group had a higher number of suggestions approved and just slightly more levels of educational advancement, and used more sick leave per year. The differences which were statistically significant were:

(1) salaries - in favor of non-disabled.
(2) average number of awards per year - in favor of the non-disabled.
(3) number of hours of sick leave used per year - more were used by workers with disabilities.
(4) the non-disabled exceeded the workers with disabilities in mean years of tenure.

Basically, the study was conducted to test the hypothesis that: "Given a vocational environment and sociological climate in which the perceptibly physically handicapped have the same opportunities for career progression and self-actualization as do non-handicapped employees, there would be few differences between the two groups in career progression and contribution" (p. 134). Tne authors concluded: "For the subjects with visual and hearing/speech handicaps, and to a lesser degree for the orthopedically handicapped, the research results support the research hypothesis" (p. 141).

The authors concluded that the major differences between the two groups were in the salary and sick leave used. Because the investigators were not able to interview the subjects personally, it was not possible to determine the causes for these differences. The major point of the study was that workers with physical disabilities measured up on all of the work performance dimensions and were only deficient in the area of more sick leave. This is not unexpected for a group which might have more health problems. However, in the critical area of promotions and per-

formance evaluations, the workers with disabilities were not significantly different from their co-workers. As can be seen from the statistics on the mean years of service with the Air Force (mean = 19.51 for disabled; 18.49 for non-disabled), both groups had, on the average, lengthy service with the government. This permitted an analysis of their records of accomplishment over time; and the study represents a unique effort to follow-up workers with disabilities as they progress through employment and career ladders.

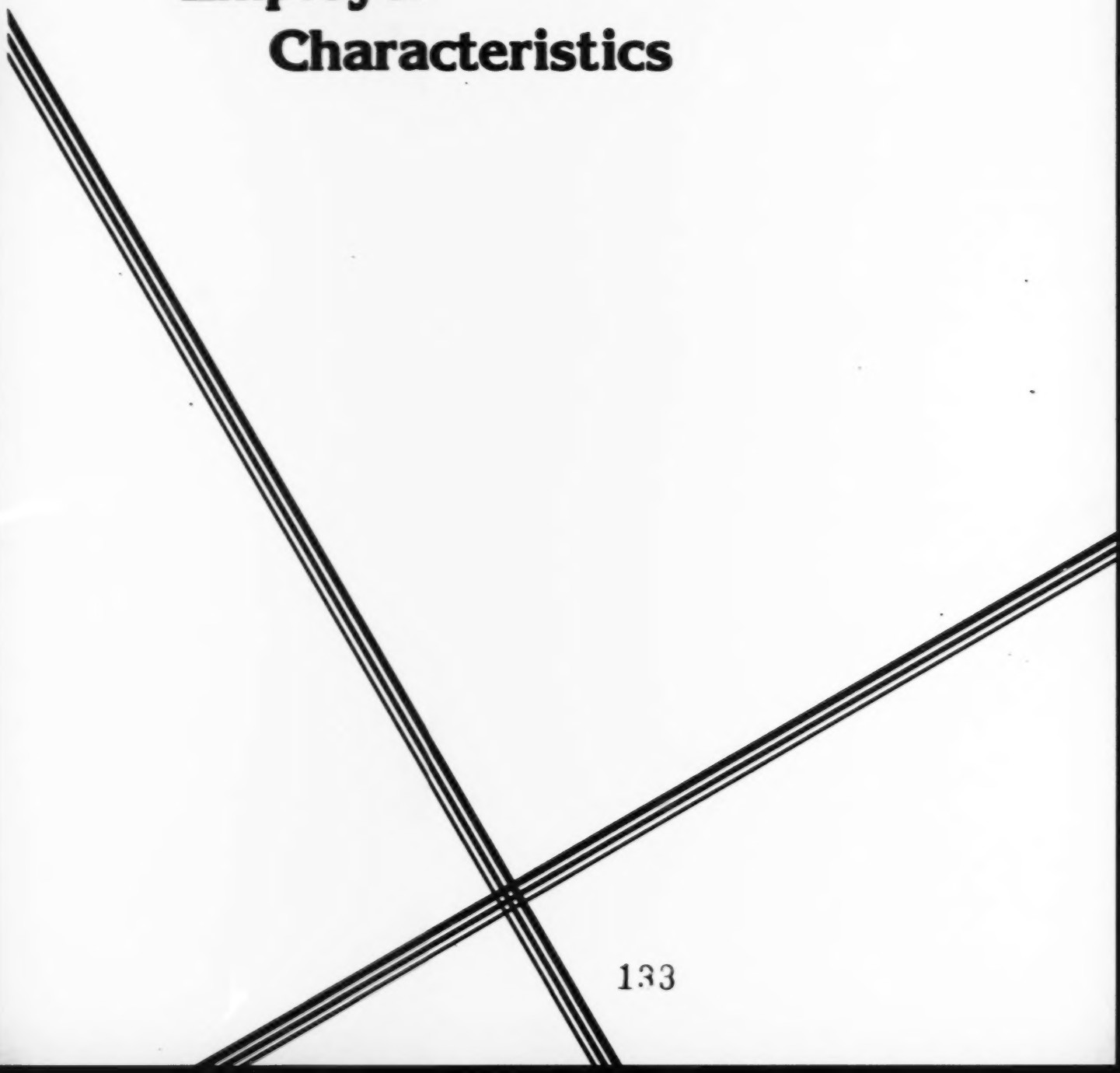
This study, although not directly addressing employer concerns about the advancement and long-term maintenance of employees with disabilities, provides data on work performance and other important variables from the employer's records. We have yet to learn about the concerns employers have about advancement and long-term employment maintenance of persons with disabilities. For example, Bolton (1981) reviewed the literature on follow-up studies of former rehabilitation clients and indicated that only two involved any longitudinal assessments. Both of these studies reported reasonably good rates of continuing employment; but both failed to report the concerns employers had about advancement or long-term employment.

It is obvious that research in this area is lacking, with the exception of the Bressler and Lacy (1980) study. To the extent that workers in the Air Force can be characterized as similar to other workers with perceptible physical disabilities, we have good evidence that persons with disabilities are performing well over time and also receiving promotions.

Summary

The research on career advancement is indeed meager. Rehabilitation literature gives ample emphasis to the underemployment of workers with disabilities, but we know very little directly from employers about participation in career advancement opportunities and activities within various types of organizations. The evidence from one excellent study indicates that workers with physical disabilities were able to compete successfully, even though their pay was somewhat lower than their colleagues. Promotion seemed to be a reality. With the advent of legislation affecting Federal contractors and a heightened sensitivity on the part of many employers, more workers with disabilities should have opportunities to move into higher level jobs and to advance through management ranks. It is time to establish programs and outreach efforts to workers with disabilities and employers to insure that they have an equal chance for such opportunities.

Employer Characteristics



Information collected during employer surveys made it possible to examine the relationship between characteristics of employers and their inclination to hire individuals with disabilities. Age, education, sex and experience with disability, as well as organizational factors such as size of the work force, type of organization and hiring policies were studied to determine their relevance to the employment of persons with disabilities.

Several factors had to be considered during the analysis. First, the criteria determining "large" versus "small" organizations was not uniform across studies. Some identified "small" firms as those with 50 employees while others used larger figures. Second, the number of workers with disabilities employed by the entire organization was not clearly distinguished from the number employed at the local site where the survey participant worked. Third, some of the studies focused on a specific disability while others defined disability in general, inclusive terms. Finally, the criterion variable differed from study to study--some used attitudes toward hiring, some actual hiring of workers with disabilities, and others used measures such as the number of job orders. The overall findings were examined with these considerations in mind.

Size of Organization

Size of the work force was the most frequently reported employer characteristic, with 19 studies analyzing the differences between organizations on this variable. Of the 19, ten studies revealed that larger firms were more favorable toward the employment of persons with disabilities (Barshop, 1959; Bolanovich & Rasmussen, 1968; Gade & Toutges, 1983; Grace, 1970; Hamilton & Roessner, 1972; Hartlage, 1968; Hartlage, 1961; Phelps, 1965; Reeder, 1958; & Zadny, 1980). Only Olshansky's (1958) survey found smaller employers to be more favorable. Eight surveys found no difference between employers on the basis of size (Bieliauskas & Wolfe, 1961; Colbert et al, 1973; Emener & McHargue, 1978; Loeb et al, 1970; Reeder & Donahue, 1958; Schletzer et al, 1961; Williams, 1972; & Wolfe, 1961).

These findings, although mixed, suggest that placement activities may be most productive with larger employers. Larger firms are more likely to be affected by affirmative action requirements. In order to fulfill their legal obligations, they may be more likely to seriously consider applicants with disabilities.

Type of Organization

Type of organization was the second most frequent characteristic with ten studies reporting data in this area. As

previously indicated, the absence of a uniform classification system across studies limits comparability to some extent. A number of studies were specific about the types of organizations surveyed while others simply differentiated between manufacturing and nonmanufacturing or made no distinction at all.

The overall results indicated that manufacturing firms were more favorably oriented toward the employment of persons with disabilities (Grace, 1970; Hartlage, 1965; Hartlage, 1961; Olshansky, 1958). However, four studies obtained mixed results (Olshansky, 1958; Phelps, 1965; Reeder, 1958; Hartlage, 1965) and four studies found no real difference among types of industries (Bolanovich & Rasmussen, 1968; Schletzer et al, 1961; Gade & Toutges, 1983; Colbert et al, 1973). Such results made it difficult to generalize about the effect organizational type had on receptivity. This was further complicated by the interaction between size and type of organization. Larger employers tend to be manufacturing firms, hence the size variable probably influenced the more favorable results for these organizations.

Education of Employer

Five studies reporting on this variable were identified. In the majority, the personnel manager acted as the respondent. While three surveys indicated that more education was positively related to receptivity (Gade & Toutges, 1983; Phelps, 1965; & Schletzer et al, 1961), one survey reported no differences based on level of education (Hartlage, 1965), and another found a negative relationship between education and receptivity (Bolanovich & Rassmussen, 1968). The most comprehensive study of the group, Schletzer et al (1961), reported that in relation to positive receptivity the level of education was the most significant factor among multiple employer characteristics.

While it has generally been assumed that more highly educated employers are more knowledgeable about the world in general and the performance capabilities of workers with disabilities in particular, there is limited evidence to support such a position. This review indicates that the level of an employer's education is probably an important factor, but surveys contain no conclusive proof that better educated employers will be more receptive to workers with disabilities.

Other Employer Characteristics

Age, sex, experience in personnel service, existence of a personnel department, and population of the area in which the organization is located were other variables investigated during employer surveys. The following briefly summarizes the results of these surveys:

Age:

* 1 study favoring younger employers (Ayer, 1970)

* 2 studies indicating no differences (Gade & Toutges, 1983; & Schletzer et al, 1961)

Sex:

* 1 study favoring women employers (Gade & Toutges, 1983)

* 1 study indicating no difference (Schletzer et al, 1961)

Years in Personnel Services:

* 1 study indicating a negative relationship (Phelps, 1965)

* 2 studies indicating no difference (Schletzer et al, 1961; Fuqua et al, 1984)

Existence of a Personnel Department:

* 1 study indicating no difference (Bolanovich & Rasmussen, 1968)

Population:

* 1 study indicating no difference in size of the city (Schletzer et al, 1961)

* 1 study indicating no difference between rural and urban area (Bolanovich & Rasmussen, 1968)

Based on this limited research and the conflicting nature of the results, it appears there is limited evidence to indicate the actual effect of these characteristics on employer receptivity to workers with disabilities.

Summary

Rehabilitation practitioners who have based their placement activities on the age and education of the employer, the size of the work force or the type of organization may need to re-examine these basic assumptions. It would be helpful to know, for example, that employers located in urban areas, primarily engaged in manufacturing, with well educated, young, female personnel officers, were the best contacts for applicants with disabilities. However, based on the characteristics derived from the research reviewed here, there is very little evidence on which to base any firm recommendations about employer receptivity.

It does appear, however, that the impetus derived from affirmative action requirements favorably orients larger, manu-

facturing employers toward the employment of persons with disabilities. Nevertheless, many placement practitioners are cognizant of the large number of small employers with whom close working relationships can be established, particularly in smaller communities. Therefore, even this one recommendation needs to be taken cautiously. As Schletzer et al. (1961) pointed out, the safest bet would be to consider employers to be diverse and highly idiosyncratic in their receptivity to the employment of persons with disabilities.

Executive Summary: Implications For Rehabilitation Practitioners

The preparation of a concluding statement for this document was rather easy--the authors were too tired to write anything lengthy. An executive summary was prepared, highlighting the implications of this review for practitioners and identifying resources and techniques to facilitate interaction and action among rehabilitation organizations, employers, and workers with disabilities. Our conclusions were derived from the interpretation of the research discussed in the reviews. Tentative conclusions based on trends are included although survey results were not usually definitive.

Employer Perspectives on Resources. Vocational rehabilitation agencies are generally viewed as helpful and productive resources for employers. Agencies can enhance the positive image by extending their services to employers through partnership programs such as those advocated throughout this report.

Vocational rehabilitation agencies can meet the need for employer services by providing professional technical assistance and placement services. Although employers have been somewhat skeptical of outside agencies, they are becoming more interested in assistance from programs with proven records of vocational programming success.

Employers perceive individual rehabilitation practitioners as lacking critical knowledge about world-of-work operations. In addition to learning about work environments and the constraints of particular occupations, and the provision of occupational information to clients, it is imperative that rehabilitation agencies establish systems to gain information about employment settings. Agency-wide initiatives involving job banks, employer development accounts, placement and other services should be implemented so that rehabilitation agencies become intimately involved in work.

There is a need to develop a more intensive and individually directed educational campaign for employers to address lingering doubts about the abilities and important work-related qualities of many workers with disabilities. The establishment of close and personal working relationships between practitioners and employers is a necessary first step in the process.

Rehabilitation organizations should extend their services to those employers who are establishing internal programs to recruit and place workers with disabilities. The success of Projects with Industry has shown that linkages with employers can pay off in considerable dividends.

More outreach efforts should be made with labor unions to bring them into the partnership arrangement with rehabilitation. Labor/management/rehabilitation committees could help lead the way to breaking down barriers historically associated with seniority and job restructuring problems.

Rehabilitation practitioners, including administrators, should capitalize on existing employer networks through which many individuals secure job leads and information about work environments. In addition, local community networks can be assessed and enhanced through the development of business advisory councils.

Advocacy groups should be aware of possible resistance from employers if they refer applicants with disabilities who are poor employment risks. Although similar advice is appropriate for all organizations involved in rehabilitation or services to persons with disabilities, advocacy groups who do not assess work readiness and provide job training have not been well received by employers.

Accommodations are playing a more significant role in placement and retention. Rehabilitation organizations need the expertise of rehabilitation engineers and others skilled in accessibility and job modifications. Such specialists should be retained as consultants and the examples of the VR agencies in Massachusetts and California should provide guidance regarding the use of such specialists.

Major national corporations have developed a number of awareness and orientation programs, some of which utilize media presentations. These should be studied and used as the basis for media which could be offered to smaller employers who do not have the resources to develop and conduct such programs.

Formal linkages between rehabilitation and business/industry operations have proven successful in bringing more workers with disabilities into the work setting. The business-rehabilitation partnership can become a reality if the commitment is made by both parties. This review provides illustrations of successful operations which can be used as models for cooperative ventures.

External Influences. External factors play a significant role in the employment process since the implementation of various regulatory acts governing affirmative action and other labor activities. The Federal legislation regarding affirmative action for persons with disabilities appears to have had a definite and positive effect on the employment of persons with disabilities. Rehabilitation practitioners should capitalize on this requirement and assist covered employers in implementing their affirmative action programs. Technical assistance and information on accessibility, accommodations, tax credits and other services are needed to facilitate each phase of the employment process from initiation through advancement.

Employers and labor unions are willing to facilitate the return to work of disabled employees. Rehabilitation agencies should work more closely with both groups to assist them in meeting this need. Also, rehabilitation agencies need to work closely with labor as well as management to help overcome the barriers and problems in employing new applicants with disabilities.

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Career Initiation. Getting started in a career represents the second major hurdle after preparation for work for persons who are disabled. The launching of a career in today's high technology and service-oriented labor market requires sophistication on the part of both the job seeker and the rehabilitation organization facilitating entry into work. All of the elements in career initiation appear to be important factors in obtaining the right job.

Rehabilitation agencies, practitioners, educators of persons with disabilities, and others involved in rehabilitation need to advise job seekers of the importance of the job application process. Employers are uncomfortable with the reporting of disability on an application blank and/or in the interview. The applicant who is disabled should expect to encounter problems in this area and be prepared to report additional information designed to offset the negative effects of reporting the disability.

Rehabilitation practitioners should evaluate the ability of applicants to conduct the application process and the interview independently. If at all possible, the interview should be done without anyone else present. If the applicant is able to conduct the interview alone, the employer is likely to assume independence of function in other tasks and the overall job.

Employers like to receive advance information on a potential employee, particularly from someone they know and trust. If the rehabilitation practitioner can assist the employer in the screening of applicants without violating ethical commitments to clients, this may result in greater return calls from employers.

Employers need considerable assistance in identifying jobs for applicants with disabilities. They tend to place such workers in low status and stereotyped positions. Rehabilitation practitioners should be able to conduct job analyses and advocate for higher level employment opportunities in addition to those which the employer is able to recognize.

Employers have difficulty in implementing the "reasonable accommodations" provision of the legislation. Rehabilitation practitioners can assist in this area by educating employers about the types of accommodations which are possible and which have been made successfully in the past. The evidence indicates that most accommodations can be relatively inexpensive and require minor modifications.

When informing employer associates that Federal legislation is being implemented and that compliance audits are being conducted, practitioners should offer employers their support and assistance in accommodating workers with disabilities so compliance problems can be avoided.

On-the-job training should be used on a wider basis. Although not appropriate for all job seekers, this technique has

proved effective in opening the doors for some workers with disabilities. OJT has been a valuable educational experience for both employers and workers, and may be particularly appropriate for small employers.

Career Establishment. The orientation phase, or initial employment period, is a time of critical importance to both the worker with a disability and the employer. Rehabilitation specialists should recognize the need for followup activities to make sure this initial period is a successful experience for the worker and the employer. The use of techniques such as the buddy system should be encouraged.

Both technical skills and work personality attributes are important to employers. Although the large employer may be able to provide intensive training during the early phase of employment, smaller employers are more likely to employ someone with both technical and work-related social skills.

Accessibility innovations and work site accommodations have opened up more job opportunities for workers with disabilities. However, rehabilitation practitioners should remember that many applicants will not need such services, and that placements are possible for some in settings which are inaccessible to others.

Career Maintenance. The evidence regarding productivity of workers with disabilities is indeed substantial. Rehabilitation practitioners should capitalize on this evidence in their presentations to employers, and be able to cite facts to support their assertions.

Smaller and specialized employers require more flexible employees, and placement activities should take this into account. The less adaptable applicants should be informed regarding such flexibility requirements, and efforts to obtain employment in other settings should receive priority.

Employers appear to have more concerns about supervision and work force relationships with mentally ill and mentally retarded persons than with other groups. Rehabilitation specialists should be particularly cognizant of this concern and provide information and support for employers to alleviate these concerns.

Although most employers with experience in personnel work in larger organizations are knowledgeable about worker's compensation, there are continuing doubts about costs and workers with disabilities. Practitioners are advised to become as informed as possible about local and state laws in order to help overcome this concern.

If practitioners are involved in the placement of workers who have residual work adjustment problems, these should be presented in a straight forward manner to employers. Otherwise, the relationship required for placement effectiveness may be jeopardized.

Career Advancement. Practitioners should address job promotion issues with both employers and disabled employees by establishing services designed to facilitate career advancement. Counseling should be an integral component of such services as job modification, adaptive equipment, and barrier removal consultation. These services should be accessible particularly for those clients who may not be able to obtain them privately or through other public agencies.

There is a need for research to identify more specifically the career advancement problems individuals with disabilities encounter, and to test promising interventions to facilitate career advancement.

Employer Characteristics. Practitioners should approach employers on the basis of potential opportunities which the employer may be able to offer individual clients rather than on descriptive characteristics such as size or type of business organization. Although there is a tendency for large manufacturing firms to be better prospects, the number of opportunities may be much greater with smaller employers. Therefore, outreach and employer development activities should be conducted across the full spectrum of employers.

Recommended Techniques For Rehabilitation Practitioners

As a result of this review and the analysis which was made to develop the conclusions, the authors identified a number of techniques which should be used more readily by rehabilitation practitioners. These follow in a brief, straightforward format. By extracting these techniques and presenting them in this format, it is hoped that they will capture the attention of practitioners and lead to careful study and possible implementation.

1. CONTACT EMPLOYERS REGULARLY

   Contacts with employers do pay off. More contacts result in more employment opportunities.

2. JOB LEADS THAT PAY OFF

   Use family, friends and associates to identify sources of job leads.

3. LIAISON ARRANGEMENTS

   Establish liaison connections with employers like those between Hewlett-Packard and the Center for Independent Living and Rochester Technical Institute for the Deaf.

4. PROJECTS WITH INDUSTRY

   Capitalize on the PWI approach to working with employers.

5. CAREER DAYS AND COLLEGE PLACEMENT SERVICES

   Encourage students who are disabled to participate actively in campus career days and college placement services.

6. TECHNICAL ASSISTANCE IN SELECTION PROCEDURES

   Offer emloyers technical assistance and services to facilitate their screening and selection procedures for persons with disabilities.

7. TECHNICAL ASSISTANCE IN ACCOMMODATIONS

   Get acquainted with the personnel staff responsible for workers with disabilities and help them to meet their needs for technical assistance in areas such as job modifications and accessibility.

8. ON-SITE TRAINING FOR EMPLOYERS

   Offer seminars to local employers--especially small employers who could benefit from such information and training on employment of workers with disabilities. Make

them available at times when employers can attend and in locations close to their homes and/or offices.

9. MEDIA PRESENTATIONS

Borrow such programs as the video tape developed by Hewlett-Packard, JUST THREE PEOPLE, or the one developed by Union Carbide Corporation-Nuclear Division, THEY'VE TRAVELED FAR TO REACH OUR DOOR--CAN WE DO LESS THAN OPEN IT?, to use with employer groups. Or produce a similar one if access to these is not available.

10. SEEK SIGNIFICANT ALLIES

Utilize conferences such as the one sponsored by Columbia University and the New York Chamber of Commerce and Industry where a recognized and important community group serves as an advocate and co-sponsor for the training.

11. FEDERAL CONTRACTORS

Identify those employers who have contracts with the Federal government and are covered by the Affirmative Action requirements for workers with disabilities, and target technical assistance and employer development activities toward their personnel and management staff.

12. TARGETED TAX CREDITS

Capitalize on employer interests in tax credits by making employers aware of these incentives and assisting them in processing the information and procedures necessary to utilize these credits.

13. ORGANIZED LABOR

Meet with representatives of organized labor to encourage their participation in working through any problems involved in integrating workers with disabilities. Contact the AFL-CIO Human Resources Development Institute for support and technical assistance.

14. JOB SEEKING SKILLS TRAINING

Such programs address written applications, resumes, interviewing skills, sources of job leads, explanation and clarification of disability, and other areas essential to effective job searches.

15. SEMINARS AND WORKSHOPS FOR EMPLOYERS

Employing workers with disabilities--the application process, interviewing, and testing of disabled job applicants--are relevant topics to cover.

16. JOB ANALYSES

Thorough and regular job analyses with input from employers and personnel specialists would identify jobs appropriate for selected rehabilitation clients. Such analyses can identify for employers the many jobs that disabled workers can perform and illustrate how job accommodations can be used.

17. OJT PROGRAMS

On-the-job training opportunities with employers provide a vehicle for entrance to the labor market for many job seekers.

18. CAREER ASSESSMENT CENTERS

Centers to assist individuals with disabilities to assess their skills for various career paths and entry-level jobs could be utilized by cooperative school/rehabilitation programs.

19. TRANSITIONAL WORK PROGRAMS

Programs such as those operated by Fountain House in New York have demonstrated the effectiveness of transitional work programs for mentally ill individuals who find the work establishment period especially troubling.

20. THE BUDDY SYSTEM

Matching new employees with disabilities with established workers can provide valuable formal and informal orientation information.

21. FORMAL ORIENTATION PROGRAMS

Use programs such as the one developed by Hewlett-Packard to prepare workers with disabilities and their co-workers.

22. EMPLOYER-OPERATED TRAINING PROGRAMS

Many employers such as IBM have established training programs specifically for persons with disabilities. Large employers may be willing to engage in such arrangements, given sufficient numbers of applicants.

23. INTERNSHIP PROGRAMS

Utilize internship programs such as the one operated by Hewlett-Packard.

24. SEMINARS ON ACCESSIBILITY AND JOB ACCOMMODATIONS

Offer programs at national, regional and state conferences where many employers and personnel specialists are in attendance.

25. DISABLED EMPLOYEES AS CONSULTANTS

Employers and rehabilitation organizations should recognize this valuable resource for assistance in implementing programs to meet the needs of workers with disabilities.

26. REHABILITATION ENGINEERS

Specialists in the design of accommodative devices and strategies should be available to assist employers and workers with disabilities, just as counselors and other professionals are provided.

27. WORKSITE REHABILITATION PROGRAMS

The program operated by Dow Chemical Company provides a model which could be adopted by large employers. The program provides an opportunity for vocational rehabilitation of Dow workers injured at work or elsewhere. The model could also be used for selected new employees with disabilities.

28. ENCLAVES

The use of groups of workers with disabilities, such as those employed at Lockheed, may provide opportunities for some individuals who would find placement problemmatic otherwise.

29. UTILIZE ATTITUDE CHANGE STRATEGIES

The material in this review provides significant information to use in attitude change programs. Opportunities for direct contact with workers with disabilities or with employer colleagues can be used as vehicles for attitude and practice changes.

30. EMPHASIZE CAREER DEVELOPMENT

Employers and others should be made aware of the interest and ability of many persons with disabilities to pursue work over a long period of time. Trade papers and publications reaching many employers should carry the message that persons who are disabled can and do advance in their careers.

Resources

The following references provide valuable information for enhancing the employability of persons with disabilities. Complete citations are listed in the bibliography.

1. Bowe & Rochlin, The Business-Rehabilitation Partnership
2. Department of Labor, A Study of Accommodations Provided to Handicapped Employees by Federal Contractors
3. Ellner & Bender, Hiring the Handicapped: An AMA Study
4. Ross, Accessible Unions: Labors Commitment to Handicapped People
5. Pati, Managing and Employing the Handicapped: The Untapped Potential
6. Galloway, Employers as Partners: A Guide to Negotiating Jobs for People with Disabilities
7. Bressler and Lacy, An Analysis of the Relative Job Progression of the Perceptably Physically Handicapped
8. Ayer, Handicapping Conditions Presenting Barriers to Employment as Elementary Teachers; Employability of Handicapped Individuals in Teaching Professions: Considerations for Rehabilitation Counseling
9. du Pont Company, Equal to the Task: 1981 du Pont Survey of Employment of the Handicapped
10. Schletzer, Dawis, England & Lofquist, Attitudinal Barriers to Employment

Appendices

Appendix A

Bibliography of Employer Surveys

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Appendix B

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